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## Understanding Yale Undergraduates' Decisions to Enroll vs. Take a Leave of Absence During the 2020-2021 School Year

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**Abstract:** During the 2020-2021 school year, the first full school year of the COVID-19 pandemic, the number of Yale students who did not re-enroll increased by a factor of 16. This capstone project explores the backgrounds and experiences of students who took time off from Yale during the 2020-2021 school year. First, I explore how students' demographics and background data are correlated with their enrollment status during the 2020-2021 school year. Most notably, I found a positive correlation between a student's predicted family income and their likelihood of having taken a gap year. The second part of my project consists of interviews with eight Yale undergraduate students who took a leave of absence during the 2020-2021 school year. Almost all interviewees spoke enthusiastically about their decision to take a leave of absence, although students' experiences varied by socioeconomic status.

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This capstone is a work of Yale student research. The arguments and research in the project are those of the individual student. They are not endorsed by Yale, nor are they official university positions or statements.

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## Introduction

I never expected to take a leave of absence from Yale. In fact, before the COVID-19 pandemic, I remember talking to a classmate who had taken a leave of absence to work at a startup and thinking about how I could never imagine myself doing that. Several months after that conversation, the COVID-19 pandemic fundamentally changed higher education and the world at large.<sup>1</sup> I found myself grappling with existential questions about the purpose of a college education, and I struggled to decide whether I should enroll at Yale during the 2020-2021 school year despite what I perceived to be less than ideal circumstances. As the universe would have it, I ended up taking a leave of absence from Yale during the 2020-2021 school year to work as a software engineer at a Silicon Valley startup called Humu.

Ever since I made the decision not to enroll last year, I have been fascinated by how my peers at Yale navigated the question of whether or not to enroll. When I refer to Yale students who took time off, I mean to include both first-years who deferred enrollment (i.e., the traditional gap year between high school and college) and non-first-years who were granted leaves of absence.<sup>2</sup>

Due to the Covid-19 pandemic, in the summer before the 2020-2021 school year, Yale students were presented with a number of options regarding enrollment. Marvin Chun, the Dean

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<sup>1</sup> Richard Arum and Mitchell L. Stevens, “What Is a College Education in the Time of Coronavirus?,” *New York Times*, March 18, 2020, <https://www.nytimes.com/2020/03/18/opinion/college-education-coronavirus.html>.

<sup>2</sup> According to “J. Leave of Absence, Deferral, Withdrawal, and Reinstatement” in the 2021-2022 Yale College Programs of Study: “A student in Yale College who is in academic good standing will normally receive permission, upon petition to the Committee on Honors and Academic Standing through the residential college dean, to take one or two terms of leave of absence, provided that the student departs in academic good standing at the end of a term and returns at the beginning of a term. Such permission will not be granted to first-year students during their first term of enrollment, who instead may request permission to defer for one year and enter the following fall term.” Although first-years who deferred enrollment are distinct from non-first-years who were granted leaves of absence, I’m assuming they faced many similar considerations when choosing whether to enroll or take a leave of absence. Also, note that taking a leave of absence or deferring enrollment is distinct from withdrawing from Yale, which can occur for academic, medical, personal, disciplinary, or financial reasons and requires applying for reinstatement.

of Yale College, announced that the majority of classes would be held remotely. First-years, juniors, and seniors would be allowed to live on campus in the fall, and in the spring, sophomores, juniors, and seniors would be allowed to live on campus. Both semesters, all students would be eligible to enroll in classes remotely from any location of their choosing. If students did not want to enroll (in-residence or remotely), they could request to take a gap year or leave of absence for one or two semesters. Typically, Yale undergraduates aren't allowed to take a leave of absence for more than two semesters, but "leaves in 2020-2021 [did] not count toward the usual two-term limit."<sup>3</sup> Students were assured that their requests would be approved as long as they were in "academic good standing."<sup>4</sup>

In the fall of 2020, the majority of undergraduate students chose to enroll, whether in-residence or remotely. With that said, the number of students who elected to take time off was sizable. According to the Yale Daily News, "23 percent of Yale College [sophomores, juniors, and seniors] took a leave of absence [in fall 2020] — as opposed to the 1.4 percent of students who took a leave in fall 2019."<sup>5</sup> This number is consistent with college enrollment trends nationally, according to an Axios poll in which 22% of college students reported they would not enroll in school during the fall of 2020.<sup>6</sup> Additionally, there was a "nearly sevenfold increase in students taking gap years": there were 1267 first-years at Yale in fall 2020, "a class 21 percent

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<sup>3</sup> Marvin Chun, "The 2020/2021 Academic Year," July 1, 2020, <https://yalecollege.yale.edu/get-know-yale-college/office-dean/messages-dean/20202021-academic-year-july-1-2020>.

<sup>4</sup> "COVID-19 Announcements and FAQs Archive," Yale College, accessed December 12, 2021, <https://yalecollege.yale.edu/policies-procedures/covid-19-faq/covid-19-announcements-and-faqs-archive>.

<sup>5</sup> Julia Bialek, "Students on Leave Can Remain Affiliated with Original Class of Matriculation," *Yale Daily News*, October 15, 2020, <https://yaledailynews.com/blog/2020/10/15/students-on-leave-can-remain-affiliated-with-original-class-of-matriculation/>.

<sup>6</sup> Erica Pandey, "1 in 5 College Students Don't Plan to Go Back This Fall," *Axios*, August 19, 2020, <https://www.axios.com/college-poll-students-campus-coronavirus-7b6c2687-e2df-4f72-9305-7b9f1a611f04.html>.

smaller than its original size,” because “341 students previously accepted into the class of 2024 elected to take gap years.”<sup>7</sup>

For context, in the five school years preceding the 2020-2021 school year, Yale’s first-year retention rate was 99% and its six-year graduation rate was 97%.<sup>8</sup> These pre-pandemic statistics suggest that prior to the pandemic, the decision to re-enroll at Yale was not much of a decision at all; it appears that most students automatically assume they will re-enroll. (If this were not the case, surely the retention rates and graduation rates from 2015 to 2020 would be lower.) In contrast, the statistics from the Yale Daily News indicate that the decision to enroll during the 2020-2021 school year was *not* automatic, and that the pandemic may have led students to question their education in ways they hadn’t in years past. For example, in my own experience, I found myself wondering: *What’s the point of a physical campus? Why does being on campus feel like an essential part of the college experience? What are the most important parts of a college experience to me?* I wanted to understand how other students navigated these questions, so I embarked on this project.

My research explores two sets of questions. First, how are students’ demographics and backgrounds correlated with their enrollment status during the 2020-2021 school year? I explore whether certain groups of students were more or less likely to enroll than others. The most notable finding was that there was a positive correlation between a student’s predicted family

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<sup>7</sup> Kelly Wei, “Class of 2024 Sees Record Number of Gap Years, Most Diverse Class,” *Yale Daily News*, September 1, 2020, <https://yaledailynews.com/blog/2020/09/01/class-of-2024-sees-record-number-of-gap-years-most-diverse-class/>.

<sup>8</sup> “Common Data Set 2015-2016,” accessed October 31, 2021, [https://oir.yale.edu/sites/default/files/cds2015\\_2016\\_0.pdf](https://oir.yale.edu/sites/default/files/cds2015_2016_0.pdf); “Common Data Set 2016-2017,” accessed October 31, 2021, <https://oir.yale.edu/sites/default/files/cds2016-2017.pdf>; “Common Data Set 2017-2018,” accessed October 31, 2021, [https://oir.yale.edu/sites/default/files/cds\\_2017-2018.pdf](https://oir.yale.edu/sites/default/files/cds_2017-2018.pdf); “Common Data Set 2018-2019,” accessed October 31, 2021, [https://oir.yale.edu/sites/default/files/cds\\_yale\\_2018-2019.pdf](https://oir.yale.edu/sites/default/files/cds_yale_2018-2019.pdf). “Common Data Set 2019-2020,” accessed October 31, 2021, [https://oir.yale.edu/sites/default/files/cds\\_2019-2020\\_yale\\_vf\\_030420.pdf](https://oir.yale.edu/sites/default/files/cds_2019-2020_yale_vf_030420.pdf).

income and their likelihood of having taken a gap year. The second set of research questions revolves around students who took a leave of absence during the 2020-2021 school year: how do they articulate their decision to take time off, how did they experience their time away from Yale, and what has it been like to return to Yale after taking a leave? What do their reflections tell us about how they think about the purpose and limitations of school, education and the college experience more broadly? I found that students took time off for a variety of reasons, including negative academic and social experiences during the pandemic and challenges with mental health. Seven out of eight interviewees spoke positively of their decision to take time off; the one student in my pool who identified as first-generation/low income (FGLI) was the only interviewee who was not as content with their decision, suggesting that students' experiences taking time off may have varied based on their socioeconomic status.

I anticipate these findings will be valuable for college administrators as they seek to incorporate student perspectives into their policies regarding deferment and leaves of absence. If we accept the argument that students are consumers and college is a commodity,<sup>9</sup> then certainly students' decisions about enrollment matter because the success of a college as a business is partly predicated upon a sufficient number of students re-enrolling. (Consider, for example, the fact that 22% of a college's *U.S. News & World Report* ranking is based on the college's first-year retention rate and its six-year graduation rate.<sup>10</sup>) In addition to providing insight to college administrators, this research contributes to historical knowledge about the unique challenges

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<sup>9</sup> Irene C. L. Ng and Jeannie Forbes, "Education as Service: The Understanding of University Experience Through the Service Logic," *Journal of Marketing for Higher Education* 19, no. 1 (May 28, 2009): 38–64, <https://doi.org/10.1080/08841240902904703>; Tony Woodall, Alex Hiller, and Sheilagh Resnick, "Making Sense of Higher Education: Students as Consumers and the Value of the University Experience," *Studies in Higher Education* 39, no. 1 (January 2, 2014): 48–67, <https://doi.org/10.1080/03075079.2011.648373>.

<sup>10</sup> "How U.S. News Calculated the 2022 Best Colleges Rankings," accessed December 12, 2021, <https://www.usnews.com/education/best-colleges/articles/how-us-news-calculated-the-rankings>.

facing college students during the COVID-19 pandemic. With enrollment numbers down at Yale and colleges across the nation,<sup>11</sup> there will likely be ramifications for recent college graduates in the job market in the years to come. By documenting what happened during the 2020-2021 school year, my project can provide context that may help explain post-pandemic economic trends.

Finally, I hope my project will be valuable to both current and future college students. As I mentioned earlier, I've spent much of the pandemic questioning and reflecting on my education, and I learned through this project that many other students did, too. Ideally, readers of my capstone will be prompted to examine the role of education in their own lives, and will think about the value of learning that takes place outside of school.

## **Literature Review**

Due to the recency of the ongoing COVID-19 pandemic, research about its impact on higher education is still emerging. In particular, the question of how students decided to take time off from college during the pandemic has not yet been answered. Before the pandemic, scholars have documented reasons why students attend college as well as variables affecting students' decisions to "stop out," a term used in the literature that means taking time off from college before ultimately re-enrolling and graduating. Most of the literature related to stopping out is based on quantitative data and does not engage with student narratives in great depth. Furthermore, most of this research has been conducted at non-selective colleges before the

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<sup>11</sup> Elissa Nadworny, "College Enrollment Plummeted during the Pandemic. This Fall, It's Even Worse," *Morning Edition* (NPR, October 26, 2021), <https://www.npr.org/2021/10/26/1048955023/college-enrollment-down-pandemic-economy>.



pandemic. Thus, to understand Yale students' decisions during the pandemic, further research is needed. By bringing theory about the market for higher education into conversation with scholarship exploring student enrollment decisions, my capstone attempts to make sense of why so many Yale students chose to take a leave of absence during the 2020-2021 school year compared to previous, pre-pandemic school years.

### *1. Students' Reasons for Attending College*

Research exploring students' reasons for going to college can provide a good starting point for my capstone, though arguably the literature does not capture the complexity of deciding whether or not to enroll during a global pandemic. A number of studies have shown that students' primary reason for going to college is to prepare themselves for employment.<sup>12</sup> Other common reasons for going to college include improving quality of life and personal growth<sup>13</sup> and developing a deep understanding of a specific field.<sup>14</sup> With that being said, American college students' motivations for attending college seem to have shifted over time, with younger generations (Millennials and Generation X) increasingly placing value on extrinsic motivations

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<sup>12</sup> Kieran Balloo, Regina Pauli, and Marcia Worrell, "Undergraduates' Personal Circumstances, Expectations and Reasons for Attending University," *Studies in Higher Education* 42, no. 8 (August 3, 2017): 1373–84, <https://doi.org/10.1080/03075079.2015.1099623>; Robert E. Cipriano and Richard L. Riccardi, "Why Students Go to College," *The Department Chair* 27, no. 2 (2016): 5–6, <https://doi.org/10.1002/dch.30102>; Jennifer L. Schultz and Jeanne L. Higbee, "Reasons for Attending College: The Student Point of View," *Research and Teaching in Developmental Education* 23, no. 2 (2007): 69–76; Jean M. Twenge and Kristin Donnelly, "Generational Differences in American Students' Reasons for Going to College, 1971–2014: The Rise of Extrinsic Motives," *The Journal of Social Psychology* 156, no. 6 (November 1, 2016): 620–29, <https://doi.org/10.1080/00224545.2016.1152214>.

<sup>13</sup> Balloo, Pauli, and Worrell, "Undergraduates' Personal Circumstances, Expectations and Reasons for Attending University."

<sup>14</sup> Cipriano and Riccardi, "Why Students Go to College."

such as making money compared to older generations (Baby Boomers) who placed more of an emphasis on intrinsic reasons like learning for the sake of learning.<sup>15</sup>

Certainly, the motivations described above were pertinent for college students during the 2020-2021 school year. However, the unique circumstances of the pandemic likely complicated students' reasons for going to college. For instance, consider a student majoring in the natural sciences who is preparing for a career in laboratory research. If the student needed to take a lab class which was only offered online (such as PHYS 165L, General Physics Laboratory), one could make the argument that a student who enrolled in the online course might not be as well-prepared for employment as the student who took the class in-person after taking a leave of absence. The same could likely be said for students in other disciplines where in-person instruction is essential for career preparation, such as students majoring in art, theater and performance studies, and engineering. At the same time, if students prioritize making money as described above, then perhaps they would "push through" college, despite potentially suboptimal learning conditions, for the sake of entering the job market sooner rather than later.

In summary, previous research has demonstrated that there are a number of reasons why students choose to attend college, including career preparation, improvements in quality of life, personal growth, opportunities for economic advancement, and a love of learning. These findings are valuable but arguably do not take into account how students navigate the decision of whether or not to attend college during a time of crisis when the traditional college experience has been considerably altered.

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<sup>15</sup> Twenge and Donnelly, "Generational Differences in American Students' Reasons for Going to College, 1971–2014."

## 2. Students' Reasons for Stopping Out of College

In addition to research about students' reasons for going to college, there exists a robust body of literature investigating why students decide to stop out – that is, to take time off before graduation but ultimately re-enroll and receive a degree. This research mainly consists of large survey-based studies conducted at non-selective institutions before the pandemic. Specifically, many studies have focused on how demographic variables and other factors are correlated with college persistence. Below I've summarized some of the key findings.

*Socioeconomic status:* First-generation/low income (FGLI) students are more likely to stop out than their non-FGLI peers.<sup>16</sup> There are several possible explanations for this phenomenon. Given the “direct relationship between socioeconomic status and readiness for college,”<sup>17</sup> FGLI students may stop out because of poor academic performance. Additionally, FGLI students and their families are more vulnerable to financial hardship, and thus FGLI students may stop out due to financial constraints facing their families.<sup>18</sup>

*Student involvement and social connectedness:* Students who are involved on campus and well-connected socially are less likely to stop out compared to their less involved, less connected

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<sup>16</sup> Cynthia Demetriou et al., “The Activities, Roles, and Relationships of Successful First-Generation College Students,” *Journal of College Student Development* 58, no. 1 (2017): 19–36, <https://doi.org/10.1353/csd.2017.0001>; Laura Horn, “Stopouts or Stayouts? Undergraduates Who Leave College in Their First Year,” Statistical Analysis Report (Washington, D.C: National Center for Education Statistics., 1998), <https://nces.ed.gov/pubs99/1999087.pdf>; Jeff E. Hoyt and Bradley A. Winn, “Understanding Retention and College Student Bodies: Differences Between Drop-Outs, Stop-Outs, Opt-Outs, and Transfer-Outs,” *NASPA Journal (National Association of Student Personnel Administrators, Inc.)* 41, no. 3 (Spring 2004): 395–417, <https://doi.org/10.2202/0027-6014.1351>; Terry T. Ishitani, “Studying Attrition and Degree Completion Behavior among First-Generation College Students in the United States,” *The Journal of Higher Education* 77, no. 5 (2006): 861–85.

<sup>17</sup> Andrew Wu, “Stop-out Students' on-Leave Experiences: How Interactions Affect Institutional Commitment and Re-Enrollment” (Northeastern University, 2018), <https://doi.org/10.17760/D20324126>.

<sup>18</sup> Veronica Terriquez and Oded Gurantz, “Financial Challenges in Emerging Adulthood and Students' Decisions to Stop Out of College,” *Emerging Adulthood* 3, no. 3 (June 1, 2015): 204–14, <https://doi.org/10.1177/2167696814550684>.

peers.<sup>19</sup> A leading scholar in this area is Vincent Tinto, who has written extensively about the important role that sense of belonging can play in determining college persistence.<sup>20</sup> Through his work, Tinto aims to challenge the point of view that students drop out or stop out of college because of individual failings, and instead seeks to expose how the campus community often fails to adequately support students, leading them to drop out or stop out.

*Academic achievement:* Students with lower grades are more likely to stop out than their high-achieving peers.<sup>21</sup> Tinto's work, described above, is relevant to academic achievement because students who get poor grades in college may feel they are "not cut out for college," i.e., that they don't belong in a collegiate setting. If they don't feel a sense of belonging, underperforming students may stop out of college.

*Mental health:* Students with mental health conditions such as depression or social anxiety are more likely to stop out than their neurotypical peers.<sup>22</sup> According to the *Diagnostic and Statistical Manual of Mental Disorders*, the diagnosis of a mental health condition like

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<sup>19</sup> Lisa M. Swenson Goguen, Marnie A. Hiester, and Alicia H. Nordstrom, "Associations among Peer Relationships, Academic Achievement, and Persistence in College," *Journal of College Student Retention: Research, Theory & Practice* 12, no. 3 (November 2010): 319–37, <https://doi.org/10.2190/CS.12.3.d>; Iryna Y. Johnson, "Analysis of Stopout Behavior at a Public Research University: The Multi-Spell Discrete-Time Approach," *Research in Higher Education* 47, no. 8 (October 9, 2006): 905–34, <https://doi.org/10.1007/s11162-006-9020-9>; Sherry Woosley, "Stop-Out or Drop-Out? An Examination of College Withdrawals and Re-Enrollments," *Journal of College Student Retention: Research, Theory & Practice* 5, no. 3 (November 1, 2003): 293–303, <https://doi.org/10.2190/6NW2-FUJ4-4ATU-EKHC>.

<sup>20</sup> Vincent Tinto, *Leaving College: Rethinking the Causes and Cures of Student Attrition* (University of Chicago Press, 1987).

<sup>21</sup> Sheilynda Stewart, Doo Hun Lim, and JoHyun Kim, "Factors Influencing College Persistence for First-Time Students," *Journal of Developmental Education* 38, no. 3 (2015): 9.

<sup>22</sup> Ann M. Gansemer-Topf et al., "Examining Factors Influencing Attrition at a Small, Private, Selective Liberal Arts College," *Journal of Student Affairs Research and Practice* 51, no. 3 (2014): 270–85, <https://doi.org/10.1515/jsarp-2014-0028>; Michael T. Hartley, "Examining the Relationships Between Resilience, Mental Health, and Academic Persistence in Undergraduate College Students," *Journal of American College Health* 59, no. 7 (August 1, 2011): 596–604, <https://doi.org/10.1080/07448481.2010.515632>; Alicia H. Nordstrom, Lisa M. Swenson Goguen, and Marnie Hiester, "The Effect of Social Anxiety and Self-Esteem on College Adjustment, Academics, and Retention," *Journal of College Counseling* 17, no. 1 (2014): 48–63, <https://doi.org/10.1002/j.2161-1882.2014.00047.x>.

depression and social anxiety typically requires “clinically significant distress or impairment in social, occupational, or other important areas of functioning.”<sup>23</sup> If a student is experiencing some kind of clinically significant distress or impairment, then it seems unlikely that the student would feel a sense of belonging on their campus. Therefore, by Tinto’s theory, the student might stop out of college.

The pre-pandemic findings above are certainly relevant in the context of the 2020-2021 school year, but I suspect the decision to stop out during the pandemic was even more complicated than previous research can account for. For example, based on casual conversations with peers, it seems plausible to me that there was a kind of network effect at play behind students’ decisions to enroll or to take time off – perhaps students were more likely to take time off if their closest friends took time off. If such a network effect existed, then students who were highly involved and/or social were potentially *more* likely to stop out during the pandemic, whereas previous research would suggest these students are less likely to take time off. Therefore, while previous research has demonstrated the link between students’ decisions to stop out and socioeconomic status, student involvement, social connectedness, academic achievement, and mental health, this research arguably does not capture the complexity of enrollment decisions during a global crisis that fundamentally upended the American college experience.

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<sup>23</sup> *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*, 5th ed (Arlington, VA: American Psychiatric Association, 2013).

### 3. *College as a Commodity, the Student as the Consumer*

Economic theory relating to the market for higher education can help explain students' reasons for stopping out or staying enrolled. Specifically, we can consider students as consumers and colleges as commodities. Under this framework, students' preferences constitute "demand-side market pressure," which in turn factors into how colleges operate fiscally.<sup>24</sup> Economists use the term "willingness to pay" (WTP) to describe the maximum cost a consumer would willingly spend on a good or service. In the context of higher education, if we view students as consumers, then WTP becomes relevant because students and their families are only willing to pay so much for a certain educational experience – if the conditions of the experience change, students and their families might reevaluate whether the cost is truly worth the experience, and whether they are still willing to pay. During the pandemic, students may have decided not to enroll precisely because they were no longer willing to pay.<sup>25</sup> For example, we can see this sentiment reflected in an article entitled "'Do You Really Want to Spend the Money on Online Yale?' For the Class of 2020, Gap Years Beckon."<sup>26</sup> Of course, the concept of willingness to pay is only relevant for students and families who are paying for their college education – that is, it's not relevant for students who are on full financial aid.

However, I would argue that WTP extends beyond financial considerations. Many students, regardless of their families' financial background, were forced to confront questions

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<sup>24</sup> Brian Jacob, Brian McCall, and Kevin Stange, "College as Country Club: Do Colleges Cater to Students' Preferences for Consumption?," *Journal of Labor Economics* 36, no. 2 (April 1, 2018): 309–48, <https://doi.org/10.1086/694654>; Ng and Forbes, "Education as Service."

<sup>25</sup> Matt Kristoffersen, "Yale Online: Can a Remote Education Compare?," *Yale Daily News*, April 14, 2020, <http://features.yaledailynews.com/blog/2020/04/14/yale-online-can-a-remote-education-compare/>.

<sup>26</sup> Kevin Mahnken, "'Do You Really Want to Spend the Money on Online Yale?' For the Class of 2020, Gap Years Beckon," accessed October 3, 2021, <https://www.the74million.org/article/do-you-really-want-to-spend-the-money-on-online-yale-for-the-class-of-2020-gap-years-beckon/>.

about the value of college, monetary or otherwise. If college is supposed to be “the best four years of your life” and students care about optimizing their college experience, then students were likely asking themselves the question “Do you really want to spend your *time* at online Yale?” This is a spin on the question “Do you really want to spend your money on online Yale?” but is relevant to students of all financial backgrounds; we are all constrained by the finite nature of time. If time is money, then theory about the market for higher education is important to understanding why students chose to take time off during the 2020-2021 school year, during which the cost of college tuition remained unchanged despite a significantly altered college experience.<sup>27</sup> This area of economics can help us make sense of how students, whether on financial aid or not, navigated enrollment decisions during the pandemic.

#### *4. The Impact of COVID-19 on Higher Education*

Finally, research on the effects of COVID-19 within higher education is still emerging and has not yet explored in depth students’ decisions to take time off vs. enroll in school. A search of Articles+ (a database of journal articles) using the keywords “gap year” and “COVID” yielded only one study that explicitly mentioned gap years in relation to the COVID-19 pandemic.<sup>28</sup> In that study, approximately 200 American college students between the ages of 18 and 24 were surveyed about the effects of the pandemic on their mental health. One finding was that 22.9% of the respondents reported taking time off from school, with first-generation students being significantly more likely to take time off than students who do not identify as first-

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<sup>27</sup> Arum and Stevens, “What Is a College Education in the Time of Coronavirus?”

<sup>28</sup> Jenny Lee et al., “Impact of COVID-19 on the Mental Health of US College Students,” *BMC Psychology* 9, no. 1 (December 2021): 95, <https://doi.org/10.1186/s40359-021-00598-3>.

generation. Student enrollment decisions are not the focus of the study, demonstrated by the fact that there were just eleven instances of the terms “gap year” and “time off” throughout the ten-page article. Rather, the research sought to determine the physical, emotional, and social impacts of COVID-19 on college students in the United States.

In another study, researchers conducted a hypothetical choice experiment to determine college students’ likelihood of enrolling under various hypothetical scenarios.<sup>29</sup> The authors looked at five variables in particular: in-person status of classes (in-person vs. online vs. hybrid), class content delivery (synchronous vs. asynchronous), campus services (for instance, access to campus gyms and libraries), social events (for example, whether club meetings or parties were allowed), and tuition and fees. These variables were mixed and matched to create a number of hypothetical situations. Students from six universities were then asked to evaluate their likelihood of enrolling under each scenario on a Likert scale ranging from 1 (“Definitely will not take classes”) to 7 (“Definitely will take classes”). Statistical analyses were then conducted to determine students’ willingness to pay (WTP), which was discussed in the third part of this literature review. The authors found significant variation between universities and even among students from the same university, indicating “that there is no one-size-fits all policy for tackling significant shocks like the COVID-19 pandemic.”<sup>30</sup>

Outside of the two studies mentioned above, it seems that most of the research on the effects of COVID-19 within higher education has not focused on student enrollment decisions.

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<sup>29</sup> Jason S. Bergtold et al., “The COVID-19 Pandemic and Fall 2020 Undergraduate Enrollment Intentions: Capturing Heterogeneity Across and Within Universities in the U.S.,” in *Agricultural & Applied Economics Association Annual Meeting* (Austin, TX, 2021).

<sup>30</sup> Bergtold et al., “The COVID-19 Pandemic and Fall 2020 Undergraduate Enrollment Intentions: Capturing Heterogeneity Across and Within Universities in the U.S.”



According to one literature review published in August 2021, research has centered around five main themes: “(1) digital learning, (2) e-learning challenges, (3) digital transition to emergency virtual assessment (EVA), (4) psychological impact of COVID-19, and (5) creating collaborative cultures.”<sup>31</sup> Thus, there is still a scarcity of research investigating student enrollment decisions and gap years during the pandemic.

## **Methodology**

In order to investigate which Yale students took time off in 2020 and to learn more about their experiences, I conducted mixed methods research including statistical analysis and qualitative interviews.

### *Demographic & Background Data*

I originally requested information from the Yale Office of Institutional Research about students taking leave, but they were not able to provide the information in time. As an alternative, I was able to gather data about Yale undergraduates from [yalies.io](https://yalies.io), a website that’s similar to the Yale Face Book (Yale’s official student directory) with the added functionality that users can see which students took a leave of absence.<sup>32</sup> The team behind the [yalies.io](https://yalies.io) website maintains an application programming interface (API) that allows users (authenticated via CAS) to query data from the website’s database, which combines data from the Yale Face Book and the Yale Directory.<sup>33</sup> They have also created a Python library called `yalies` which makes using

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<sup>31</sup> Muzammal Ahmad Khan, “COVID-19’s Impact on Higher Education: A Rapid Review of Early Reactive Literature,” *Education Sciences* 11 (2021), <https://eric.ed.gov/?id=EJ1307918>.

<sup>32</sup> Erik Boesen, “Yalies,” accessed October 10, 2021, <https://yalies.io/>.

<sup>33</sup> Erik Boesen, “About,” Yalies, accessed April 10, 2022, <https://yalies.io/about>.

the API very straightforward. I was able to write a relatively simple Python script (included in Appendix A) to gather the following data about members of the classes of 2022, 2023, and 2024:<sup>34</sup> `leave`, a Boolean value indicating whether or not the student took a leave of absence;<sup>35</sup> `year`, an integer indicating the student’s class year (either 2022, 2023, or 2024); `major`, a string indicating the student’s major (for example, “Economics” or “Statistics and Data Science”); and `zip_code`, the zip code of the student’s home address. I included students’ zip codes in my data as an admittedly imperfect proxy for their socioeconomic status. I downloaded the median family income for every zip code in the United States from the American Community Survey<sup>36</sup> and then wrote code to look up the median family income for each student’s zip code. I labeled this variable `median_family_income_of_hometown`. Since I’m using American zip codes, international students are excluded from the portion of my analysis where I examine income.

The data I filtered includes 4865 students, the majority of whom (about 65%) have a zip code associated with their profile. About a third of students in the dataset are marked as having

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<sup>34</sup> I didn’t include members of the class of 2025 in the data since they would have been in high school during the 2020-2021 school year.

<sup>35</sup> In my conversation with the creator of `yalies.io`, I learned that this value is determined by comparing snapshots of the Yale Face Book or Yale Directory at various points in time. If a student’s class year changes from one snapshot to the next, then that student is marked as having taken a leave of absence. Therefore, although the value isn’t officially reported by Yale, it’s computed based on official Yale data and seems to be an excellent proxy for whether or not the student took a leave of absence. Anecdotally, my friends and I have used the site and haven’t noticed any inaccuracies. Furthermore, a student’s `leave` value may appear to be true if the student has taken a leave of absence or if the student has withdrawn for any reason (academic, medical, personal, financial, or disciplinary). For my capstone project, I’m interested in researching students who have taken a leave of absence specifically, but the `yalies.io` data, for obvious reasons, doesn’t include information about whether the student took a leave of absence or withdrew. With that said, withdrawal at Yale is very rare, so I think it’s fair to assume that the vast majority of students whose `leave` status is true *did*, in fact, take a leave of absence (as opposed to having withdrawn).

<sup>36</sup> “S1903 | MEDIAN INCOME IN THE PAST 12 MONTHS (IN 2019 INFLATION-ADJUSTED DOLLARS)” (U.S. Census Bureau), accessed April 10, 2022, <https://data.census.gov/cedsci/table?q=median%20income&g=0100000US%248600000&y=2019&tid=ACSSST5Y2019.S1903>.

taken a leave of absence (34%). There were some majors with very few declared students (for example, Physics & Geosciences, Russian, and Spanish). I eliminated majors with fewer than 20 students from my analysis of enrollment status by major so that I wouldn't face sample size issues.

### *Interviews*

For the second portion of my project, I interviewed eight students who took a leave of absence during the 2020-2021 school year (either for a single semester or the entire year).<sup>37</sup> I focused specifically on students who were sophomores during the spring of 2020 in order to limit the scope to students from the same class year. I chose this particular class year because they were at an interesting point in their academic careers in the spring of 2020 – they had experienced almost two years of normal, pre-pandemic Yale and still had half of their college experience left. Also, these students would have been juniors in the fall of 2020, so by Yale's policies, they would have had the option (1) to live on campus throughout the entire school year or (2) to live off campus in New Haven or (3) to enroll remotely from anywhere in the world.<sup>38</sup> In other words, these students had the full menu of options available to them for the 2020-2021 school year. Another reason to interview these students was that none of them have graduated yet, and I was thus able to contact them more easily.

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<sup>37</sup> In planning this research, I determined that it was possible, although unlikely, that my questions could cause interviewees distress due to the fact that the COVID-19 pandemic was taking place during the 2020-2021 school year, which I asked them about. Therefore, I applied for IRB exemption, and my application was approved.

<sup>38</sup> Peter Salovey and Scott Strobel, "Fall 2020," August 3, 2020, <https://covid19.yale.edu/community-messages/fall-2020>.

I identified Yale students who have taken time off by writing a simple Python script, which collected a list of current members of the class of 2023 who took a leave of absence according to [yalies.io](https://yalies.io). Then, I randomly selected a subset of 75 students whom I invited to interview, with the assumption that approximately half of them would accept the invitation. Ultimately, the response rate was much lower than I expected, with eight students agreeing to schedule an interview.

My interviews were semi-structured, meaning each one differed slightly from the next, but every interview covered the same core topics focusing on students' shift online in spring 2020, their decision to take time off, how they planned their time away, and their experience returning to Yale. All interviews were conducted remotely via Zoom and lasted between 30 minutes and an hour. Each interviewee consented to being recorded, so I used Zoom's functionality to record the interviews to the cloud. Interviews were transcribed using Trint, a secure audio transcription software.

When I present my findings, I'll use pseudonyms to refer to interviewees. Five of the interviewees (Jacob, Lily, Leah, Ezra, and Melanie) took the entire year off, whereas Caleb, Genevieve, and Charlotte enrolled in the fall semester and took a leave of absence during the spring semester. Five of the interviewees disclaimed they do not receive financial aid or identify as first-generation/low-income (FGLI). One interviewee declined to respond to questions related to finances. Only two interviewees indicated that they receive financial aid, and one of those two students identified as FGLI. For a compact summary of the interviewees, refer to the table on the following page.

Pseudonym	Pronouns	Took time off in fall 2020?	Took time off in spring 2021?	Major(s)	On financial aid?	Identifies as FGLI?
Jacob	he/him	✓	✓	American Studies	No	No
Lily	she/her	✓	✓	Environmental Studies	No	No
Caleb	he/him		✓	Mechanical Engineering Economics	No	No
Genevieve	she/her		✓	Sociology (Intensive)	Yes	No
Ezra	they/them	✓	✓	History of Science, Medicine, & Public Health Women's, Gender, & Sexuality Studies	Yes	Yes
Melanie	she/her	✓	✓	Computing and the Arts	No	No
Leah	she/her	✓	✓	Humanities	No	No
Charlotte			✓	Ethics, Politics, & Economics	Left blank	Left blank

## Findings & Analysis

First, I examine data related to students' demographics and backgrounds. I discuss how leave status is related to three variables: class year, major, and estimated socioeconomic status. Key findings include: 1) The class of 2023 had the highest percentage of students who took a leave of absence. 2) Contrary to the expectation that science majors would be more likely to take a leave because of the importance of in-person learning, majors within the humanities had the highest percentages of students who took a leave of absence; many of the majors with the *lowest* percentages of students who took a leave of absence were biology or biology-adjacent majors. 3) Using zip code as a proxy for socioeconomic status, I found that students who took a leave of absence were from wealthier backgrounds compared to students who enrolled. This third finding ties to the second finding in that humanities majors tend to be from wealthier socioeconomic

backgrounds compared to STEM majors.<sup>39</sup> My research suggests a possible correlation between socioeconomic status and likelihood of taking a leave of absence, relating to economic theory about willingness to pay (WTP) mentioned in the literature review.

In the second part of this section, I present and analyze quotations from my interviews, grouping responses together thematically. I found that students took leaves of absence for a variety of reasons, including feeling dissatisfied with academic and social experiences during spring 2020 or fall 2021, focusing on mental health, and wanting to take a break from school while dealing with the challenges of the pandemic. All of the students were employed or took unpaid internships. A majority lived in New Haven during their time off and reported feeling satisfied with their decision to take a gap year, although students' experiences varied based on their socioeconomic status.

### *Demographic & Background Data*

This section explores how leave status is related to the three variables I mentioned above: class year, major, and estimated socioeconomic status using zip code as a proxy. After presenting my findings, I discuss possible interpretations for the trends I observed, explaining how the data relates to WTP and other financial considerations.

### Class Year: Sophomores Were the Most Likely to Take Time Off

The class of 2023 had the highest percentage of students who took a leave of absence (38%), followed by the class of 2024 (34.6%) and then the class of 2022 (28.2%). In other

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<sup>39</sup> Joe Pinsker, "Rich Kids Major in English," *The Atlantic*, July 6, 2015, <https://www.theatlantic.com/business/archive/2015/07/college-major-rich-families-liberal-arts/397439/>.

words, 28.2% of the current class of 2022 is comprised of students who were originally part of the class of 2021 and were juniors at the start of the pandemic; 38% of the current class of 2023 is comprised of students who were originally part of the class of 2022 and were sophomores at the start of the pandemic; and 34.6% of the current class of 2024 is comprised of students who were originally part of the class of 2023 and were first-years at the start of the pandemic. (See Table 1 in Appendix B.)

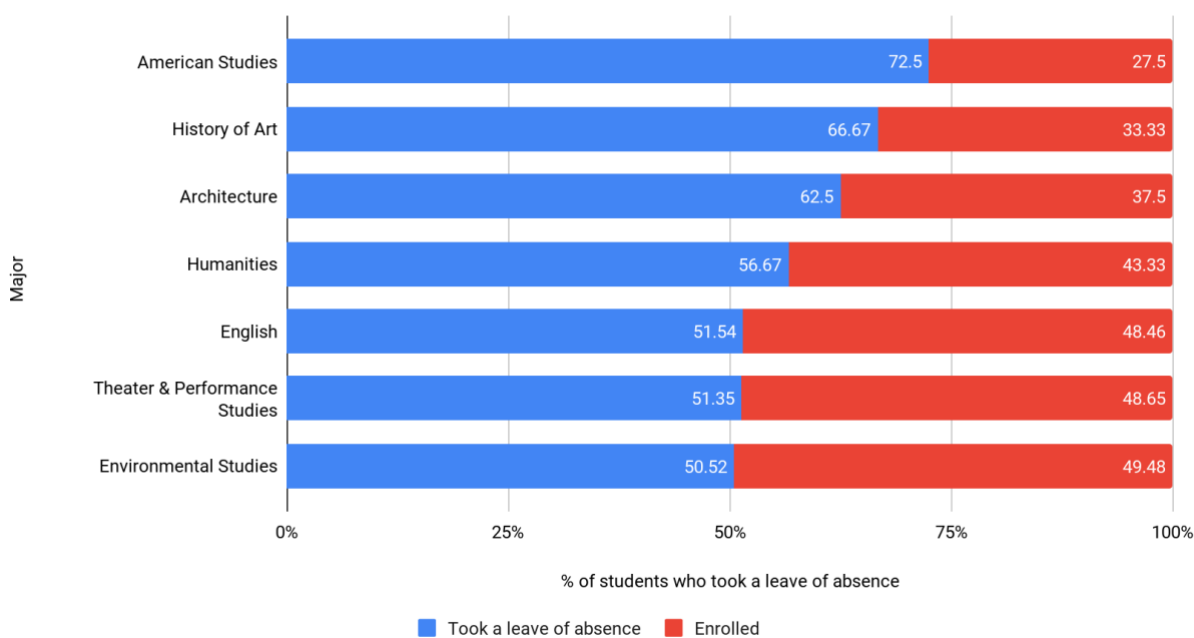
It's possible that students' decisions were determined in part by the amount of time they had left in college. As mentioned above, students in the class of 2022 who took a leave of absence were originally part of the class of 2021. When the pandemic began in the spring of 2020, those students were juniors with a single year of college left. I suspect that students from the original class of 2021 were less likely to take a leave of absence than students from the original classes of 2022 or 2023 because at the start of the 2020 school year, without the development of a vaccine, the end of the pandemic wasn't in sight; therefore, members of the class of 2021 may have been more likely to "just stick it out" or "push through to the finish line" despite less than ideal circumstances compared to members of the classes of 2022 and 2023 who still had at least half of their time in college ahead of them. I hypothesize that this reasoning may explain why the class of 2022 had the lowest percentage of students who took a leave of absence, although my research doesn't explore this hypothesis explicitly.

#### Field of Study: Humanities Majors Were the Most Likely to Take Time Off

I've included a table of data for all of the majors where at least 20 students in my data set have declared that major (see Table 2 in the Appendix B). For seven of the majors, a majority of

the students took a leave of absence: American Studies, History of Art, Architecture, Humanities, English, Theater & Performance Studies, and Environmental Studies.

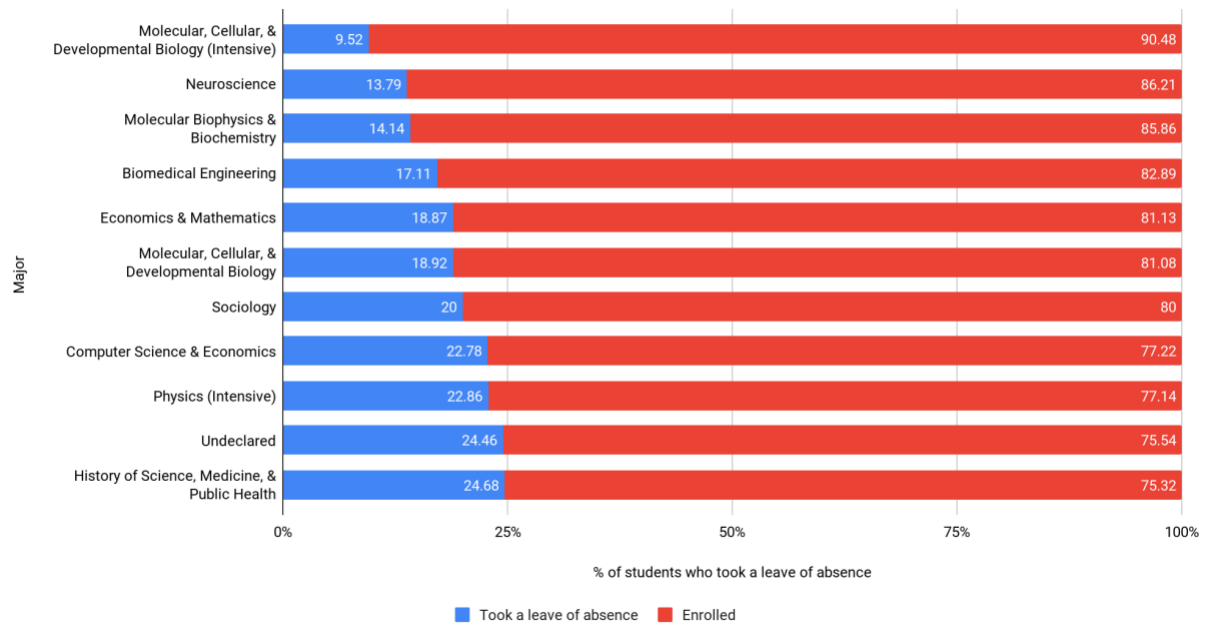
Majors in which the majority of students took a leave of absence



Conversely, there were eleven majors where less than a quarter of the students took a leave of absence: Molecular, Cellular, & Developmental Biology (Intensive), Neuroscience, Molecular Biophysics & Biochemistry, Biomedical Engineering, Economics & Mathematics, Molecular, Cellular, & Developmental Biology, Sociology, Computer Science & Economics, Physics (Intensive), Undeclared, and History of Science, Medicine, & Public Health.



Majors in which less than a quarter of students took a leave of absence



Among the majors with the highest percentages of students who took time off, several of the majors – Architecture, Theater & Performance Studies, and Art – are disciplines where learning in-person is traditionally very important.<sup>40</sup> Architecture<sup>41</sup> and Art<sup>42</sup> education often takes place in studio classes in which students are given access to art and design materials, and the Theater & Performance Studies curriculum requires practice-based classes where students practice performing.<sup>43</sup> It seems plausible that students from these departments may have been

<sup>40</sup> Samhitha Josyula, “Art Classes Adapt to Coronavirus Pandemic,” *Yale Daily News*, September 28, 2020, <https://yaledailynews.com/blog/2020/09/28/art-classes-adapt-to-coronavirus-pandemic/>.

<sup>41</sup> “Architecture,” Yale College Programs of Study 2022–2023, accessed April 10, 2022, <http://catalog.yale.edu/ycps/subjects-of-instruction/architecture/>.

<sup>42</sup> “Art,” Yale College Programs of Study 2022–2023, accessed April 10, 2022, <http://catalog.yale.edu/ycps/subjects-of-instruction/art/>.

<sup>43</sup> “Theater and Performance Studies,” Yale College Programs of Study 2022–2023, accessed April 10, 2022, <http://catalog.yale.edu/ycps/subjects-of-instruction/theater-studies/>.

especially likely to consider taking a leave of absence given the lack of in-person classes at Yale during the 2020-2021 school year.

Another notable trend is that many of the majors with higher percentages of students who took time off are humanities majors, as opposed to STEM majors. Previous research has shown that students from higher socioeconomic backgrounds are more likely to major in the humanities as opposed to STEM.<sup>44</sup> Assuming this correlation holds at Yale, then it's possible that the prevalence of taking a leave of absence among non-STEM majors is indicative of an association between socioeconomic status and likelihood of taking a leave of absence.

On the other end of the spectrum, many of the majors with the lowest percentage of students who took time off fall within or are adjacent to the life sciences: Molecular, Cellular, & Developmental Biology, Neuroscience, Molecular Biophysics & Biochemistry, Biomedical Engineering, and History of Science, Medicine, & Public Health. I suspect many of these students are pre-med. Although gap years are common and often encouraged for pre-med students in between college and medical school,<sup>45</sup> perhaps rates of taking a leave of absence were lower among these students during the pandemic because they tended to be from lower socioeconomic backgrounds on average and were not paying the full sticker price to attend Yale;<sup>46</sup> therefore, WTP may not have been as big of a consideration for these students compared to students from wealthier backgrounds, who pay out of pocket to attend Yale.

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<sup>44</sup> Pinsker, "Rich Kids Major in English."

<sup>45</sup> Brendan Murphy, "Premeds: Capitalize on Gap Years before Applying to Medical School," American Medical Association, accessed April 16, 2022, <https://www.ama-assn.org/residents-students/preparing-medical-school/premeds-capitalize-gap-years-applying-medical-school>.

<sup>46</sup> Quoc Trung Bui, "Who Had Richer Parents, Doctors Or Artists?," *NPR*, March 18, 2014, <https://www.npr.org/sections/money/2014/03/18/289013884/who-had-richer-parents-doctors-or-arists>.

Undeclared students were also relatively unlikely to take time off. By Yale College guidelines, students must declare their major by the end of their sophomore year,<sup>47</sup> so these undeclared students are presumably first-years and sophomores who are still figuring out what to pursue academically. These students may have been less likely to take time off because they were younger and less academically-specialized, perhaps contributing to their being less employable. Therefore, employment as an alternative to school may have been less possible for undeclared students. Also, students who are undeclared may be undeclared because they have less of a sense of vocational direction, and therefore might not know which employment opportunities to pursue.

#### Socioeconomic Status: Students from Wealthier Backgrounds Were the Most Likely to Take Time Off

Throughout the rest of this paper, I'll refer to the yearly median family income associated with a student's hometown zip code by calling it the student's estimated family income, which is an admittedly imperfect proxy for their family's actual income. Before getting into my findings, I want to acknowledge that I'm not sure, from a statistical perspective, how confident we can be that the median family income of a Yale student's hometown zip code is a good predictor of their family's actual income.

The median estimated family income for students who took a leave of absence was about \$129,732 (in 2019 inflation-adjusted dollars), compared to a median estimated family income of roughly \$110,600 (in 2019 inflation-adjusted dollars) for students who enrolled. The *average*

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<sup>47</sup> "Major Programs," Yale College Programs of Study 2022–2023, accessed April 10, 2022, <http://catalog.yale.edu/ycps/yale-college/major-programs/>.

estimated family income for students who took a leave of absence was approximately \$136,779 (in 2019 inflation-adjusted dollars), compared to an average estimated family income of \$121,543 (in 2019 inflation-adjusted dollars) for students who enrolled. I conducted a homoscedastic  $t$ -test to determine if the difference in average estimated family income between students who enrolled vs. students who took a leave of absence was statistically significant. Given the typically skewed distribution of income data, I used a one-tailed test. I obtained a  $p$ -value of about  $1.2 \times 10^{-27}$ , which is less than any typical threshold for statistical significance (0.10, 0.05, or 0.01), suggesting that the difference in average estimated family income between students who took time off and students who enrolled *is* statistically significant.

There are many ways to interpret the statistically significant difference between the average estimated family income for students who took time off compared to the average estimated family income for students who enrolled. One possibility is that students from higher-income backgrounds were more likely to be able to *afford* to take a leave of absence. Students taking a leave of absence do not have access to Yale's resources, and they would need to pay for basic cost of living expenses, potentially including rent, utilities, food, insurance, etc. It seems plausible to me that lower-income students and their families might have less money in savings to tap into as a safety net to help fund a potential gap semester or year. Another possible explanation is that students from lower-income backgrounds were less likely to take a leave of absence because they had the goal of graduating on time and entering the workforce sooner in order to put their college degree to use and earn a salary as college-educated professionals. A final possibility ties back to willingness to pay (WTP), which I discussed in the literature review. Since students from wealthier financial backgrounds are more likely to pay the full sticker price

to attend Yale, they may have been more likely to consider whether a modified Yale experience was worth tens of thousands of dollars compared to students who receive financial aid.

### *Interviews*

In this section, I present and analyze my qualitative interviews. I've grouped responses into three broad categories: students' reasons for taking a leave of absence, their experiences during their time off, and their reflections upon returning to Yale after taking time off. Students generally reported positive experiences and were content with their decisions to take time off, but my sample was small and not socioeconomically representative of Yale's undergraduate population.

### Reasons for Taking a Leave of Absence

Students reported being motivated by four primary factors in deciding to take a leave: the learning environment, social factors, concerns for their mental health, and the general uncertainty of the pandemic. One common theme was having had a negative academic experience during the spring 2020 semester, when the pandemic first began, most students were displaced from campus, and school was abruptly shifted online. When asked about his experience, Jacob responded "My experience was it f\*cking sucked. It was absolutely awful... I just was so checked out of classes. I had no motivation to do any work." For Jacob, once Dean Chun made the announcement that most classes would be virtual during the fall 2020 semester, there was no question that he would be taking time off: "There was never a moment for me of like, 'Should I do this? Should I not?' It was straight up like, 'I'm not going back to virtual school... I will figure something else out.'"

Jacob's description of his experience and his choice of language indicates rather extreme feelings about the spring 2020 semester. While Jacob's experience is not perfectly representative of the other interviewees' experiences, most students I interviewed expressed negative emotions regarding that academics that semester, at least to some extent. Lily, for example, spoke about how schoolwork lost its meaning and how she began to question the purpose of her classes. Her instructors relaxed their expectations, partly because of the stressors in their own lives and partly to accommodate students. One professor "hadn't graded anything from before the pandemic started... and then he didn't grade anything afterwards" either, leading her to wonder, "What am I getting out of this?" Based on her experience that semester, Lily consulted with her family over the summer about whether or not she should enroll in the fall. Her dad told her he thought coming back to Yale would "still [be] worth it" despite the circumstances. Lily pushed back, saying, "I *don't* feel like it's still worth it." Ultimately, she decided not to enroll in the fall of 2020 or the spring of 2021.

While Jacob and Lily both expressed negative feelings toward the academic aspect of the virtual college experience, for other students, it was the social factor that was lacking. Leah recalled feeling "really angry" upon receiving Dean Chun's email on March 15, 2020,<sup>48</sup> in which students were instructed not to return to campus if possible. Her immediate reaction was, "This is a joke. This is not happening. I'm going back to campus. I'm finishing the rest of my experience, the way I want it to be." Leah expanded on her idea of the ideal college experience, explaining, "What I really wanted [out of college] was to make really cool friends and socialize with really cool people... I knew that's what I wanted out of Yale. I knew that I wouldn't be able to get it at

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<sup>48</sup> Peter Salovey, "COVID-19 – Moving Courses Online and Other Significant Updates," August 3, 2020, <https://covid19.yale.edu/community-messages/covid-19-moving-courses-online-and-other-significant-updates>.

home on Zoom.” She “hated” the spring 2020 semester and, like Jacob, described her decision to take time off as “almost immediate.”

Jacob, Lily, and Leah all took leaves of absence because of negative academic and social experiences during the spring 2020 semester. Another concern that arose for students during that semester was the stress of essentially being kicked off campus, and some students took a leave of absence in order to avoid having to possibly deal with that stress again. Ezra, who uses they/them pronouns, told me that during the spring of 2020, “I didn’t really have any place to go” and that they were put in a “difficult position.” Unsure of where to stay, they lived with a friend while negotiating with Yale about the possibility of staying on campus.<sup>49</sup> Eventually, Ezra was informed that they would be allowed to stay on campus, but the notification came “really late” and Ezra “had already made other plans [to] find people to stay with.” Ezra described the process of negotiating with Yale as “so hard” and felt “really wary” as a result. While navigating their housing situation, Ezra “didn’t have any time to do schoolwork.” At that point in time, when thinking about the fall 2020 semester, they imagined a hypothetical scenario in which students were invited back to campus during the fall of 2020, only to be kicked off campus again. Thus, Ezra decided to take a gap year.

Similar to Ezra, Melanie recalled the “panic” of having to leave campus during the spring of 2020. However, Melanie's decision to take a leave of absence had less to do with her experience during the spring of 2020 and more to do with the challenges of life during the pandemic. She explained that there were many “external stressful factors” in her life at that point in time, including the 2020 presidential election, the pandemic, “family stuff,” and academics.

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<sup>49</sup> Valerie Pavilonis, “Students Scramble as Yale Updates Coronavirus Policies,” *Yale Daily News*, March 18, 2020, <https://yaledailynews.com/blog/2020/03/17/analysis-students-scramble-as-yale-updates-coronavirus-policies/>.

She “was not in a state of mind to really focus and hone in on my studies” due to those stressors and “needed space” to “reflect” before being “ready to go back to school.” Melanie was able to take advantage of Yale’s leave of absence policy in order to reset and recalibrate.

Jacob, Lily, Leah, Ezra, and Melanie all took the entire year off. I also spoke to three students, Caleb, Genevieve, and Charlotte, who enrolled in the fall of 2020 but decided to take a leave of absence the following semester. Both Caleb and Genevieve cited mental health challenges as a primary reason behind taking time off, while Charlotte expressed dissatisfaction with her experience during fall 2020, echoing other interviewees’ feelings about the spring 2020 semester. Charlotte “really hated” her classes during the fall and “thought that I wasn’t learning anything,” despite taking classes with professors she “loved.” She “had never hated school before,” and thought it was “sad to take classes and dislike them, because we go to Yale and we’re so lucky to take classes from the smartest people in the world.” After having that experience in the fall and regretting it, she decided not to enroll in spring 2021. She had a realization that “time at Yale is so precious” and that it wouldn’t be “worth it” to enroll.

Throughout many of the responses above, students’ choice of language – for example, deciding whether or not enrollment would be “worth it” after a negative experience, as both Lily and Charlotte put it – reflects the idea of WTP. For other students, taking a leave of absence was not about having had a negative experience that made them question the value of enrolling. Rather, for Melanie, Caleb, and Genevieve, the disruption of the pandemic brought a silver lining, providing them with the chance to take a pause when they were dealing with mental health issues and other challenges. Regardless of students’ reasons for taking a leave of absence, though, finances likely played an enormous role in their decision, whether they were conscious of its role or not. The fact that some students wondered whether Yale during the pandemic would



be “worth it” clearly indicates that they questioned their willingness to pay, perhaps because they do not receive financial aid and their families would be paying tens of thousands of dollars out of pocket for a potentially subpar experience. For the other students – Melanie, Caleb, and Genevieve – their decision to take time off was likely enabled by their relative socioeconomic privilege, given that none of them identify as low-income. That is, they may have had funds to tap into that helped sustain them during their time off. Thus, students’ interview responses tie back to the data analysis earlier in this paper and provide evidence for the finding that enrollment status was tied to socioeconomic background.

#### Students’ Experiences During Their Leaves of Absence

The majority of the students I interviewed (six out of eight) lived in New Haven during their leave of absence. Thus, while these students didn’t have access to campus resources due to COVID-19 restrictions, they were not completely removed from New Haven and the Yale community, either. Their proximity to Yale likely allowed them to maintain relationships with their college friends, thereby decreasing the isolation that students commonly feel while taking time off from school.<sup>50</sup> Being in New Haven also likely provided a sense of normalcy and familiarity during the uncertainty of the pandemic and the strangeness of not being in school.

All of the students I interviewed were employed or took an unpaid internship during their leave of absence. So many of them lived in New Haven because their positions were remote or based in New Haven. They worked across a variety of areas including entertainment, childcare, agriculture, finance, research, education, technology, and consulting. Some interviewees had

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<sup>50</sup> Wu, “Stop-out Students’ on-Leave Experiences.”

been employed by Yale prior to the pandemic and continued in those positions during their time off. Other students found positions by searching for job postings on the Internet, reaching out to their networks (i.e., contacting Yale professors), and looking for opportunities shared via departmental or extracurricular email lists.

Students had mixed experiences in terms of employment. Some students worked jobs that had a significant impact on their career trajectories. For example, Jacob described how his career goals have changed because of the work he pursued in the entertainment industry during his time off. It was his “first opportunity” to work in entertainment, and he realized, “Okay, actually, I’m really excited about what I’m doing, and this is kind of unlocking a new potential professional path for me... This is a professional passion that’s sort of emerging.” As a result of his positive experience, Jacob has been able to “re-shift” his priorities to better reflect his career objectives.

Like Jacob, other students had experiences that impacted their career plans; unlike Jacob, however, some of these students learned what they *didn’t* want to pursue professionally. Caleb, for instance, described “hating” the “toxic” culture of working remotely at a hedge fund, leading him to realize he did not want to go into finance after graduation. Instead of the structured work of school, he reported getting “no feedback or guidance” from his colleagues. On the rare occasions where he was provided with feedback, he was “yelled at.” Caleb described things coming to a head during one evening when he cooked dinner for friends: “I got a phone call on my personal line [from] my boss... so everyone was sitting down to eat and I had to sit on a Zoom with my boss for three hours in the evening, just sort of getting grilled and yelled at.”

Despite his particularly negative experience at the hedge fund, Caleb spoke enthusiastically about his decision to take a leave of absence, telling me he “would make the same decision a thousand times over” and that it was “the best decision I made at college.” His

internship experience led him to realize sooner rather than later that working in finance was not something he wanted to pursue. In addition to informing his career objectives, Caleb's gap semester "allowed me to slow down and appreciate things" after "being stressed and driven" for "years."

Almost all of the students I interviewed (seven out of eight) told me they felt similar to Caleb and were content with their decision to take a leave of absence. For example, Leah expressed gratitude for her remaining time at Yale by comparing herself to friends in the class of 2022 who decided not to take a leave of absence; these friends lamented the fact that they only had "a year and a half of normal school" before the pandemic began and have been dealing with "a weird hybrid" since then. Leah stated she was "very glad" of her decision: "I haven't regretted it for a second." Many interviewees spoke in similar terms.

The one student who wasn't as content with their decision was Ezra, who lost their health insurance when they decided to take a leave of absence since their health insurance was provided through Yale Health. The difficulty of navigating access to healthcare without health insurance, among other factors, led Ezra to say that, "There are definitely things that would prevent me from taking another [gap year]" if they had to make the same decision over again. Notably, Ezra was the only student I interviewed who told me they identify as FGLI.<sup>51</sup> My sample of interviewees is obviously too small to generalize about the Yale undergraduate population more broadly, but the challenges Ezra mentioned may be indicative of the challenges faced by low-income students who took a leave of absence. Additionally, students from lower-socioeconomic backgrounds may have decided *not* to take a leave of absence because they anticipated some of

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<sup>51</sup> The other interviewees either explicitly confirmed they do not identify as FGLI, or declined to provide this information.

these challenges. As mentioned earlier, I found a statistically significant difference between the predicted socioeconomic background of students who took a leave of absence vs. those who enrolled, and this difference may be explained in part by the fact that students who are from lower-income backgrounds feared losing access to resources like healthcare if they took a leave of absence.

In summary, other than facing issues related to accessing resources, students generally reported very positive feelings regarding their decisions to take time off. They felt content that they didn't squander their time at Yale during the pandemic, and in the process, they gained clarity about their priorities and career plans.

### Reflections Upon Returning to Yale

Many interviewees spoke about feeling a sense of purpose and an appreciation for school and Yale upon re-enrolling. Jacob shared that taking a gap year gave him a “renewed, really excited appreciation for this place and all the people here who make it so special.” Similarly, Caleb reflected that working made him realize “how much I missed school” and “how much I loved learning things.” Being back at Yale, he has felt “so appreciative all the time” and often finds himself noticing something “cool” that he hadn't paid attention to in prior school years and thinking, “I'm going to miss this about Yale.”

In addition to a feeling of gratitude for their remaining time at Yale, students described becoming more intentional about their personal philosophy of education. For example, Charlotte began to think differently about her education after realizing that being in school is a choice. She explained that each student has “a lot of freedom” and is not “required to do anything.” That is, “if you don't want to come back to school, you don't have to.” While school had been a given in

her life prior to the pandemic, she now thought of it as an intentional choice, leading her to strategize about how “to take full advantage” of that choice by taking intellectually stimulating classes, attending guest lectures on campus, taking part in extracurriculars, and socializing.

And yet, if students took advantage of every single opportunity at Yale – if they constantly tried their best in every pursuit – they would become exhausted. Many interviewees spoke about a newfound perspective on work-life balance that has helped them make the most of Yale while also taking time for themselves. Genevieve, who took a leave of absence to focus on her mental health when she was dealing with “a very deep depressive episode,” reflected that being back at Yale this year has been “great” because she has gotten “better at prioritizing my health care and making sure my well-being comes before anything else.” Being away from school has provided her with the “skills... to deal with the stress and intensity that is Yale.” Similar to Genevieve, one of Caleb’s reasons for taking time off was the fact that his “mental health was really low.” He described feeling “busy,” “burned out,” and “overworked for a very long time,” so upon returning to Yale, he decided, “I’m going to relax a lot more. I’m not going to push myself as hard. I’m not going to take a ton of classes that are going to kill me.” Melanie echoed this sentiment, sharing that taking time off has “made me an advocate for working less” and has led her to prioritize “nonproductive time.”

The responses in this section indicate that taking time off from college can lead students to be more appreciative and intentional, and to find balance in their lives. Some researchers have suggested that taking a gap year could improve the mental health of college students,<sup>52</sup> and while my study is far from comprehensive, my findings support the idea that taking time away from

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<sup>52</sup> William Beaver, “Would a ‘Gap Year’ Help Reduce Mental Illness Among College Students?,” *Kappa Delta Pi Record* 57, no. 3 (July 3, 2021): 110–14, <https://doi.org/10.1080/00228958.2021.1935177>.

school may be beneficial for student wellbeing. One implication of my research is that perhaps Yale and other colleges should consider enacting policies that would enable more students to take time off, either after high school or during college. In designing these policies, college administrators would need to be mindful of how students of different socioeconomic statuses would be impacted, so that all students (not just wealthy students) could afford to take time off.

### **Limitations**

There are several limitations to my research that should be taken into consideration: the small sample size of the number of people I interviewed, a potential bias in the people who responded to my requests to interview, the imperfect nature of the yalies.io data, and limitations of using zip codes as a proxy for socioeconomic status.

As mentioned previously, I reached out to 75 Yale students who were originally from the class of 2022 and took a leave of absence for at least one semester during the 2020-2021 school year. Of those 75 students, two students informed me that they were ineligible for the study due to having taken time off prior to the pandemic. Of the remaining 73 students, 13 responded to indicate that they would be interested in being interviewed, and I ended up interviewing eight of those students. Those eight students are almost certainly not representative of the entire population of students who took a leave of absence during the pandemic. It's possible that certain students were more likely to respond to my interview request due to being strong proponents of gap semesters or gap years, being excited about or proud of how they spent their time during their gap, etc. Also, since I didn't offer any incentive to participate in my study, it's possible that certain students were less likely to participate since they would not have been compensated for their time.

A second limitation to mention is the imperfect nature of the yalies.io data. As described in the methodology section, the label indicating whether or not students took a leave of absence on the website is calculated by looking at snapshots of the Yale Face Book or Yale Directory at various points in time and determining whether or not a student's class year changed from one snapshot to another. While I believe this metric is fairly accurate, there is certainly a small number of students who are marked as having taken a leave of absence when they actually *withdrew*, or took a leave of absence prior to the pandemic.<sup>53</sup> Thus, my study likely slightly overestimates the proportion of students who took a leave of absence during the 2020-2021 school year.

The final major limitation to my research is the fact that I used students' zip codes as a proxy for their socioeconomic status but did not have direct access to students' financial aid status or family income. While using zip codes is standard procedure in education studies literature, it would be valuable to add other financial variables to further research examining gap year trends during the pandemic (students' financial aid status, family income, Pell Grant eligibility, etc.).

Even with all of the limitations described above, I expect my findings would generalize to other elite U.S. colleges that (1) have an undergraduate population which is demographically similar to Yale's population, (2) typically have high retention and graduation rates, and (3) had similar leave of absence policies during the pandemic. Future research could explore how my research questions apply more generally to students at colleges across the US and not just at Yale.

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<sup>53</sup> I was not able to obtain data about how common withdrawal is among Yale undergraduates.

## Conclusion

This capstone project contributes to knowledge about which groups of Yale students were more likely to take a leave of absence during the pandemic, and what those students' experiences were. I found that the following groups of students were the more likely to take time off: (1) students who were sophomores during the spring of 2020 compared to students from other class years; (2) humanities majors compared to non-humanities majors; and (3) wealthy students compared to lower-income students. Students' reasons for taking a leave of absence varied greatly, from feeling dissatisfied with "online Yale" to dealing with mental health issues. During their time off, students filled their time by working or taking unpaid internships, which provided them with a sense of clarity regarding their priorities and career goals. Upon returning to Yale, students reported feeling a renewed sense of purpose and appreciation for college. Overall, students spoke highly of their decisions to take time off, although we should not overlook the fact that my sample mainly consisted of wealthy students, with only one interviewee out of eight identifying as FGLI.

My research shows that there can be tremendous value in taking a break from school; it also suggests that the opportunity to take time off may be more accessible to wealthy students compared to lower-income students. In the future, I would like to see Yale provide institutional support so that any student, regardless of socioeconomic status, can take a leave of absence to explore potential career paths, similar to the co-op programs at Northeastern University,<sup>54</sup> Drexel

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<sup>54</sup> "Cooperative Education," Northeastern Employer Engagement and Career Design, accessed April 17, 2022, <https://careers.northeastern.edu/cooperative-education/>.



University,<sup>55</sup> and Georgia Institute of Technology.<sup>56</sup> To be fully inclusive, policies to support career exploration would need to explicitly take into consideration the needs of FGLI students. For example, one problem that arose for Ezra, a FGLI student, was the fact that their health insurance had been provided through Yale and they lost their health insurance while they were on a leave of absence, whereas non-FGLI students were able to rely on their parents' health insurance during their time off. Ideally, students taking a leave of absence would have the option to remain on Yale's health insurance. The issue of healthcare is just one example of the factors that Yale administrators would need to consider when designing more inclusive leave of absence policies so that more Yale students can reap the benefits of time away from school.

On a personal level, I'm extremely grateful that I was fortunate enough to be able to take a leave of absence during the past school year. One of the joys of working on this capstone project was getting to interview students and hear about their experiences, many of which were similar to my own experiences during my gap year. It was fascinating to hear students explain their thoughts in a way that completely resonated with me, but that I, myself, wouldn't have been able to articulate. One comment in particular that has stuck with me is Charlotte's observation, "I am choosing to be a student and... at any juncture, I can choose not to be a student." I have been in school since I was three, and the only breaks I had taken prior to the pandemic were school-sanctioned ones (Thanksgiving break, winter break, spring break, and summer break). While I love school, I never questioned what it meant to be in school, because it has been my whole life for as long as I can remember.

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<sup>55</sup> "Undergraduate Co-Op," Steinbright Career Development Center, April 30, 2020, <https://drexel.edu/scdc/co-op/undergraduate/>.

<sup>56</sup> "Co-Ops," Georgia Institute of Technology Career Center, accessed April 17, 2022, <https://career.gatech.edu/co-op>.

I'm reminded of a quotation from David Foster Wallace in his 2005 commencement speech at Kenyon College: "There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says 'Morning, boys. How's the water?' And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes 'What the hell is water?'"<sup>57</sup> Water is both everything and nothing to fish: it's essential to their life, and yet they may not even realize it's there. To make a trite analogy, as a student in preschool through my junior year of college, I was like the young fish in many ways. What is life outside of school? My life largely revolved around school: most of my friends were from school; I spent most of my waking hours physically at school; at home, I spent many more hours doing homework for my classes.

When the time came to apply to college, there was never a question in my mind that I would go. During my junior year, the college counseling office at my high school had every student fill out a form about their ambitions and future plans. One of the questions on the form was, "Why are you going to college?" I remember not knowing what to say, because there was no other alternative as I saw it. I ended up writing:

"I'm excited about going to college because I've loved school from the beginning (I'm definitely nerdy), and I'm looking forward to being away from home and finding a school with a strong sense of community. When I tour colleges or look through college websites, I find myself so happy about the idea of taking interdisciplinary classes, living in a house with cool architecture and lots of history, and joining groups for social justice or sustainability."

It's true that I've loved school from the beginning, but what I realized during my gap year and through this capstone is that life is more than just school. In high school, I barely slept because I

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<sup>57</sup> David Foster Wallace, "This Is Water" (Kenyon College, 2005), [https://www.youtube.com/watch?v=PhhC\\_N6Bm\\_s](https://www.youtube.com/watch?v=PhhC_N6Bm_s).

devoted myself to my schoolwork and extracurriculars. Eventually I developed chronic headaches, and I had headaches most days during my junior and senior years. I visited a neurologist, expecting her to diagnose me with some terrible rare condition. But the solution was simple: I was getting so many headaches because I wasn't sleeping enough. I think the fact that I let my health deteriorate so much illustrates the extent to which my life revolved around school. Now I know that school is important, but so many other things are important, too: my health, my relationships, and downtime.

In my opinion, learning – whether in formal settings or not – is part of what I think makes up a good and worthy life. I expect I will always feel this way. Something I've been thinking about post-gap-year is that learning doesn't just happen in schools. I would argue that in my role as an intern and then a full-time software engineer at Humu, I learned as much as, if not more than, I did in any of my computer science classes at Yale. I don't mean this as a slight to Yale, but as a comment on the tremendous amount of learning that can happen beyond school.

While the COVID-19 pandemic has been absolutely devastating, one of the silver linings for me has been the opportunity to reflect on my education, and to disentangle the meaning of school vs. learning. I feel lucky that I got to pause my studies before my final year of college. It has made me appreciate my remaining time as a college student and also look forward to life after my schooling formally ends.

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To everyone at Humu: Thanks for taking a chance on me and giving me an absurd amount of responsibility for a 22-year-old.

To my parents: This project began back in the summer of 2020, when I started feeling a lot of angst about the purpose of college. I'm grateful for the many hours you spent deliberating with me about whether or not I should take a leave of absence from school. Those conversations are what inspired this capstone.

## Appendix A – Sample Code

```

import yalies
import os
import re
import pandas as pd

# A path to the ACS data I downloaded
censusData = pd.read_csv("ACSST5Y2019.S1903_2022-02-
20T151839/ACSST5Y2019.S1903_data_with_overlays_2021-11-04T111327.csv")

# Initialize API with token from YALIES_TOKEN
api = yalies.API(os.environ.get('YALIES_TOKEN') or input('Insert Yalies API
token: '))

# Filter to include undergrads from the classes of 2022, 2023, and 2024
undergrads = api.people(filters={
    'school_code': 'YC',
    'year': [2022, 2023, 2024],
})

zipCodes = []
for undergrad in undergrads:
    possiblezipCode = None
    if undergrad.address:
        # Use a regular expression to extract the zip code from the student's
address
        x = re.search(r"\d{5}$|\d{5}-\d{4}$", undergrad.address)
        if x:
            possiblezipCode = x.group(0)[:5]
            zipCodes.append(possiblezipCode)

medianIncomes = []
for zipCode in zipCodes:
    # if there's a zip code associated with the student, look it up in the
census data
    # to try to determine the median family income of the student's hometown
    if zipCode:
        targetValue = "ZCTA5 " + zipCode
        y = censusData.loc[censusData['NAME'] ==
targetValue]['S1903_C03_015E']
        if y.size > 0:
            medianIncomes.append(int(y.values[0]))
        else:
            medianIncomes.append(None)
    else:
        medianIncomes.append(None)

undergrads_dict = {
    'leave': [undergrad.leave for undergrad in undergrads],
    'year': [undergrad.year for undergrad in undergrads],
    'major': [undergrad.major for undergrad in undergrads],
    'zip_code': zipCodes,
    'median_family_income_of_hometown': medianIncomes,
}

```

```
df = pd.DataFrame(undergrads_dict)

# output the results to an Excel file
df.to_excel("output.xlsx")
```

**Appendix B – Tables**

Table 1: Leave status by class year

Class year	Leave status		
	% of students who took a leave	% of students who enrolled	% of students whose leave status is unknown
2022	28.2	68.1	3.7
2023	38.0	61.2	0.8
2024	34.6	64.9	0.5

Table 2: Leave status by major, for majors with at least 20 students in dataset

Major	% of students who took a leave	Total # students in dataset
American Studies	72.50	40
History of Art	66.67	36
Architecture	62.50	24
Humanities	56.67	30
English	51.54	130
Theater & Performance Studies	51.35	37
Environmental Studies	50.52	97
Film and Media Studies	50.00	30
History	49.35	231
Computing and the Arts	48.39	31
Ethics, Politics, & Economics	48.24	85
Art	45.95	37
Cognitive Science	45.45	99
Comparative Literature	44.44	27

Engineering Sciences (Mechanical)	43.48	23
Psychology	40.96	166
Political Science	39.41	269
Computer Science & Psychology	38.10	21
Environmental Engineering	37.93	29
Applied Mathematics	37.93	29
Economics	37.87	286
Mechanical Engineering	36.21	58
Ecology & Evolutionary Biology	36.11	72
Ethnicity, Race, & Migration	36.07	61
Earth and Planetary Sciences	36.00	25
Physics	35.71	28
Chemistry	33.33	30
Mathematics	32.20	59
Electrical Engineering & Computer Science	32.14	28
Global Affairs	32.03	128
Anthropology	32.00	25
Computer Science	31.45	248
Philosophy	30.23	43
Astrophysics	29.63	27
Computer Science & Mathematics	28.95	38
Statistics and Data Science	25.00	92
Chemical Engineering	25.00	32



Sociology (Intensive)	25.00	24
History of Science, Medicine, & Public Health	24.68	77
Undeclared	24.46	691
Physics (Intensive)	22.86	35
Computer Science & Economics	22.78	79
Sociology	20.00	30
Molecular, Cellular, & Developmental Biology	18.92	185
Economics & Mathematics	18.87	53
Biomedical Engineering	17.11	76
Molecular Biophysics & Biochemistry	14.14	99
Neuroscience	13.79	87
Molecular, Cellular, & Developmental Biology (Intensive)	9.52	21

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