# EthicsQuest

Utilizing Interactive Scenarios for Moral Profiling in University Ethical Decision-Making

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***Abstract*—This project, conducted within the scope of the Computer Ethics and Social Issues course [1], focuses on developing EthicsQuest [2], an interactive platform designed to enhance moral self-awareness among university students. Recognizing that ethical decision-making is a critical skill shaped by personal values and life experiences, the platform offers a unique approach by presenting users with diverse, campus-related ethical scenarios. Inspired by personality profiling tools like MBTI, [3] EthicsQuest enables students to explore and understand their moral orientations through dynamic, engaging interactions.**

***Index Terms*—moral profiling, ethics, university decision-making, interactive learning, self-awareness**

**GitHub Link: https://github.com/shahnozayadgar/ethics-quest**

## I. Introduction

Ethical decision-making is a critical skill that students develop as they encounter various social and academic challenges during university life. While most university resources focus on general rules and guidelines, they often lack tools to help students understand their personal moral perspectives. This gap can limit students' ability to reflect on their values and approach ethical situations with confidence and self-awareness.

Moral competence is defined as the ability to make conscious decisions and take responsible actions in situations that require ethical judgment. It involves being guided by one's moral principles while considering legal standards and the broader social, economic, and environmental impacts of those decisions. Research by Pohling et al. (2016), [4] which studied 366 undergraduate students, demonstrated that factors such as empathy, personal values, and personality traits significantly influence moral judgment and behavior. These findings highlight the need for tools that not only teach ethical guidelines but also encourage self-reflection and personal growth.

To address this need, we have developed EthicsQuest, an interactive platform that helps students explore their unique moral perspectives through campus-related scenarios. Drawing inspiration from personality assessment tools like the MBTI, EthicsQuest allows users to reflect on their ethical decision-making processes in a personalized and engaging way. By providing insights into individual moral orientations, the platform aims to foster greater self-awareness and better equip students to handle ethical challenges in their academic and social lives. This project seeks to combine theoretical understanding with practical application, making ethical learning more accessible and relevant to students.

### A. Motivation

The motivation for developing EthicsQuest stems from a desire to make ethical learning more accessible and engaging for students. Many students face ethical dilemmas daily, ranging from academic integrity to interpersonal conflicts, yet they often lack opportunities to critically examine their decisions in a structured and reflective way. By offering an interactive platform tailored to their experiences, we aim to provide students with a practical tool to understand their values and make more informed ethical choices. This motivation is also grounded in the belief that fostering ethical awareness during university years can contribute to the development of responsible individuals who positively impact society.

## II. Related Research

The development of EthicsQuest is grounded in an extensive review of existing research that examines the role of personality, values, and ethical decision-making. Prior studies have explored how individual traits and motivations influence ethical behavior, revealing both strengths and limitations in current approaches. By synthesizing these findings, EthicsQuest builds on established theories to develop a value-driven and practical tool for moral profiling in university settings.

### A. Related Research on Personality and Ethical Behavior

Research on ethical decision-making often centers on personality traits, particularly through the Big Five Personality Traits (OCEAN model). 1 Navin Kumar Koodamara et al. (2021) [5] investigated the role of personality in shaping ethical climates within professional environments. Their findings revealed that individuals with high Conscientiousness and Agreeableness demonstrate stronger ethical behavior, while lower levels of Neuroticism are linked to sound moral decisions. However, the study underscored that personality traits alone are insufficient to fully explain ethical choices, as situational and motivational factors also play a critical role.

Similarly, Smith & Jones (2020) [6] explored the influence of personality on academic dishonesty. Their pilot study highlighted that students with low Conscientiousness and high Neuroticism were more likely to engage in unethical


Fig. 1: Big Five Personality Traits (OCEAN model)

behaviors, such as cheating. While the study demonstrated personality's impact, it also pointed to the complexity of ethical reasoning, which cannot be captured solely through static traits.

Bratton & Strittmatter(2013) [7] extended this analysis to both academic and business settings, showing that **Extraversion and Agreeableness** are positively correlated with ethical behavior, while people with low openness tend to make less ethical choices. Their research reinforced the idea that personality traits interact with contextual factors, suggesting a need for tools that incorporate dynamic elements, such as personal values, into ethical assessments.

### *B. The Role of Personal Values in Ethical Decision-Making*

While personality provides a partial explanation for ethical behavior, recent research emphasizes the significant role of personal values in guiding moral decisions. Fritzsche David and Oz E [8] demonstrated that values such as **Benevolence and Universalism** positively influence ethical behavior, while values like **Power and Achievement** may conflict with ethical norms. These findings highlight the importance of understanding individuals' core values to predict and analyze ethical decisions more accurately.

Expanding on this, Pohling et al. (2016) [4] investigated the relationship between empathy, personal values, and the Big Five Personality Traits in determining ethical competence. Their study revealed that values, combined with empathy, serve as stronger predictors of moral judgment than personality traits alone. This supports the idea that ethical reasoning is a value-driven process, shaped by deeper motivations and contextual factors.

These studies collectively underscore a critical limitation in existing approaches: while personality assessments, such as the MBTI, provide valuable insights, they often fail to address the dynamic nature of ethical decision-making. This gap highlights the need for tools that emphasize personal values, which offer a more accurate representation of the motivations behind ethical behavior. Building on this insight, EthicsQuest shifts the focus from static personality traits to dynamic value-driven reasoning, providing a framework that aligns more closely with real-world ethical dilemmas.

## III. Method and Implementation

### *A. Theoretical Foundation: Schwartz's Theory of Basic Values*

To address the limitations of personality-focused approaches, *EthicsQuest* was developed using Schwartz's Theory of Basic Values as its primary foundation. This framework provides a comprehensive model for understanding human motivations through the lens of universal values that influence decision-making and behavior.

Schwartz's theory, first proposed in 1992 and refined in subsequent studies [9], identifies ten universal values recognized across cultures, including *Self-Direction*, *Conformity*, *Power*, *Universalism*, *Achievement*, *Benevolence*, *Stimulation*, and *Security*. These values are organized in a circular structure 2, where adjacent values share compatible motivations, and opposing values reflect conflicting priorities. This arrangement captures the dynamic tensions individuals face when prioritizing values in ethical dilemmas. For example, the desire for personal creativity (*Self-Direction*) often conflicts with adherence to group norms (*Conformity*).

Unlike static personality-based models, Schwartz's framework focuses on the motivations underlying ethical decisions, providing a dynamic and context-sensitive analysis. By integrating this theory, *EthicsQuest* moves beyond personality traits to explore how individuals' values drive moral reasoning. This approach is particularly relevant to real-world ethical dilemmas, where competing values often need to be balanced.

### *B. Implementation in EthicsQuest*

Schwartz's framework guided the selection of four opposing value pairs—*Self-Direction vs. Conformity*, *Power vs. Universalism*, *Achievement vs. Benevolence*, and *Stimulation vs. Security*—to form the foundation of *EthicsQuest*. These pairs reflect common moral tensions and were chosen for their relevance to ethical challenges faced in university settings. For example, a scenario might challenge a user to balance individual freedom with social harmony or weigh personal success against compassion for others.

Through these value-based dimensions, *EthicsQuest* offers an interactive platform where users navigate campus-related scenarios, revealing their unique moral orientations. This methodology ensures a more nuanced exploration of ethical decision-making, fostering self-awareness and enabling students to better understand how their values influence their choices.

### *C. Dimensions Used in EthicsQuest*

For the development of *EthicsQuest*, we selected four opposing value pairs from Schwartz's Theory of Basic Values: *Self-Direction vs. Conformity*, *Power vs. Universalism*, *Achievement vs. Benevolence*, and *Stimulation vs. Security*. These dimensions were chosen based on their relevance to the ethical dilemmas commonly encountered in university settings


Fig. 2: Schwartz Theory of Basic Values

and their ability to capture the dynamic tensions inherent in moral decision-making.

The selected dimensions reflect the broad spectrum of motivations that guide human behavior. Each pair contrasts values with opposing priorities, creating scenarios where users must weigh competing motivations. This structure provides a rich framework for exploring how individuals navigate ethical challenges.

**1. Self-Direction (S) vs. Conformity (C):** Self-Direction emphasizes independence, creativity, and freedom, encouraging individuals to forge their own paths and prioritize autonomy. In contrast, Conformity values adherence to social norms, obedience, and respect for authority, emphasizing social harmony and collective well-being.

**2. Power (P) vs. Universalism (U):** Power is centered on dominance, social status, and control, appealing to those who seek influence and leadership. Universalism, by contrast, focuses on equality, compassion, and collective welfare, advocating for inclusivity and the protection of others.

**3. Achievement (A) vs. Benevolence (B):** Achievement prioritizes personal success, recognition, and the demonstration of competence. Benevolence emphasizes kindness, compassion, and the well-being of close relationships, encouraging individuals to place others' needs above personal ambition.

**4. Stimulation (T) vs. Security (E):** Stimulation values excitement, novelty, and risk-taking, appealing to those who thrive on adventure and new experiences. Security, on the other hand, prioritizes stability, predictability, and safety, focusing on minimizing risks and maintaining order.

*1) Development of 16 Personality Types:* Using the selected dimensions, we extended Schwartz's framework to create 16 distinct personality types. Each type represents a unique combination of the chosen values, capturing the diversity of ethical motivations and decision-making styles. For example, a personality type might combine *Self-Direction*, *Universalism*, and *Achievement*, reflecting an innovative and idealistic leader who seeks personal success while contributing to collective welfare.

These personality types were developed to offer users a more personalized experience when engaging with the platform. By reflecting on scenarios and identifying with a particular type, users can better understand their value orientations and ethical priorities. A detailed description of all 16 personality types and their defining characteristics can be found in Appendix Table II.II

To ensure focus, the values of *Pleasure* and *Tradition* were excluded from the framework, as they overlap significantly with *Stimulation* and *Conformity*, respectively. This streamlined approach allows for a clearer exploration of ethical conflicts while maintaining theoretical rigor.

### *D. Scenarios in EthicsQuest*

The scenarios in *EthicsQuest* were designed to capture the ethical dilemmas commonly encountered in university life, drawing inspiration from various sources. Many of the scenarios were adapted from the KAIST Ethics Center Comics, which provided contextually relevant ethical challenges. Additionally, we developed original scenarios informed by the dimensions identified in Schwartz's Theory of Basic Values. These scenarios were tailored to reflect diverse aspects of university life, such as leadership roles in clubs, group or team projects, official school research or scholarship programs, laboratory activities, and interactions with faculty members.

To ensure comprehensive coverage of the ethical dimensions, we selected a total of 12 scenarios, with three scenarios per dimension. This number was chosen as it strikes a balance between providing sufficient variety to build a robust algorithm for calculating the ethical MBTI type while not overwhelming the end users with excessive length. Each scenario reflects the tensions between opposing values, encouraging users to make decisions that align with their moral priorities.

For instance, one scenario presents a situation where a student discovers that some of their lab colleagues are claiming travel allowances for trips they did not take. These colleagues encourage the student to do the same, describing it as a common and harmless practice. 3 Refusing to participate could lead to social isolation within the lab and affect future collaborations, while participating compromises the student's integrity. This scenario explores the conflict between *Conformity*, which values group harmony and obedience, and *Self-Direction*, which emphasizes personal integrity and independence. The descriptions of the remaining scenarios, each aligned with the specific dimensions used in *EthicsQuest*, are provided in Appendix Table III. III

### *E. Platform Implementation and Database Integration*

The implementation of *EthicsQuest* involved the creation of a fully functional web platform designed to deliver an engaging and seamless user experience while collecting and analyzing survey data in real time. The platform guides users through the process of registration, survey participation, and result calculation, providing personalized insights into their ethical MBTI type.[1]

[1]Github link: https://github.com/shahnozayadgar/ethics-quest


Fig. 3: False Business Trip Scenario Example

Upon accessing the website, users register and input basic demographic information, such as their major, gender, and optional MBTI type. They are then presented with a 12-question survey, designed to reflect the scenarios based on Schwartz's dimensions. Once the survey is completed, the backend logic calculates their ethical MBTI result and displays it in an intuitive format.

The development process began with a detailed design phase, during which a prototype was created using Figma. This step helped us map out the user interface and experience. The scenario illustrations featured on the platform were generated using an AI image generator to ensure visual consistency and engagement.

The frontend of the website was built using React and JavaScript, ensuring responsiveness across both mobile and desktop devices. For the backend, we utilized the Express framework with Node.js as the runtime environment. Firebase Realtime Database was integrated to store user data securely and efficiently, enabling real-time updates and seamless interaction between the frontend and backend components. API endpoints were defined to facilitate communication between the two, and rigorous testing ensured that all components worked cohesively.

One notable feature of the platform is its automatic data collection system. Survey responses are collected and exported into an Excel sheet, simplifying the analysis process. This feature not only supports the primary goal of providing users with personalized feedback but also allows researchers to gain deeper insights into the data, enhancing the overall value of the platform.

The platform has been successfully deployed and is accessible via a dedicated web link. [2] The fully functional design ensures ease of use for participants, while the real-time database integration guarantees that all collected data is accurate and readily available for further analysis. The seamless connection between the frontend and backend required significant attention to detail and posed challenges during development, particularly in API integration. However, these challenges were addressed through iterative testing and optimization.

## IV. Evaluation

After collecting data from our website over the course of one week, we gathered a total of 160 user responses. In order to analyze the data more effectively and gain meaningful insights, we decided to implement a structured evaluation process. The first step of this process involved examining the distribution of key demographic factors, including gender, department, and major type. Following this, we explored potential correlations between gender and MBTI type as well as between MBTI and eMBTI types. This allowed us to investigate any significant relationships within the data. Additionally, a question-by-question analysis was conducted to identify which individual questions received the highest and lowest scores, providing a deeper understanding of the responses. By structuring the analysis in this way, we aimed to uncover patterns and trends that could guide further interpretation of the results.

### A. Demographic analysis

The survey collected responses from a total of 160 users, representing a diverse demographic in terms of gender, academic major, and department. The gender distribution included 73 females (45.6%), 85 males (53.1%), and 2 individuals (1.3%) identifying as other.

In terms of academic background, the majority of respondents are pursuing a Bachelor's degree, with 106 participants (66.3%) reporting this level of education. Additionally, 32 respondents (20%) are enrolled in Master's programs, 20 respondents (12.5%) are PhD students, and 2 respondents (1.3%) indicated "Other" as their major. The largest group of participants comes from the Computer Science department, with 51 respondents (31.9%), followed by Civil and Environmental Engineering with 12 respondents (7.5%), and Electrical Engineering and Aerospace Engineering, each with 10 respondents (6.3%). For more detailed information, including the specific numbers for each department, please refer to Appendix Table I. I

To maintain a focused and relevant analysis, we decided to merge certain departments that were outside the scope of our research. Specifically, we combined departments not associated with KAIST, as the primary objective of our survey was to analyze responses from KAIST students. The departments with very small numbers of respondents were grouped into a single category labeled "Other." This approach allowed us to streamline the data while preserving the integrity of

our findings, ensuring that the focus remained on KAIST departments and students directly related to the study.

## V. Results

### A. Distribution across eMBTI Dimensions

The distribution of participants across the four eMBTI dimensions - Self-Direction vs. Conformity, Power vs. Universalism, Achievement vs Benevolence, and Stimulation vs. Security - revealed notable differences in alignment (Figure 4). The Mann-Whitney U test was performed to determine whether there is a significant difference between two independent groups.

Results revealed a majority of participants identified with Self-Direction (122 participants), which emphasizes independence and creativity, compared to only 38 participants favoring Conformity, which values adherence to social norms and authority (U = 2318.0, p = 1.0) (Figure 4A).

A relative balanced distribution is observed, with 78 participants aligned with Power, focusing on control and social status, with 82 participants aligned with Universalism, emphasizing equality and compassion. The difference of 4 suggests that participants value both dominance and inclusivity almost equally (U = 3198.0, p = 1.0) (Figure 4B).

A marked preference is seen for Benevolence (105 participants), which centers on close relationships, over Achievement (55 participants), which emphasizes personal success and recognition (U = 2887.5, p = 1.0) (Figure 4C).

A big disparity exists, with 117 participants identifying with Security, favoring stability and order, compared to only 43 participants favoring Stimulation, which values excitement and novelty (U = 2515.5, p = 1.0) (Figure 4D).

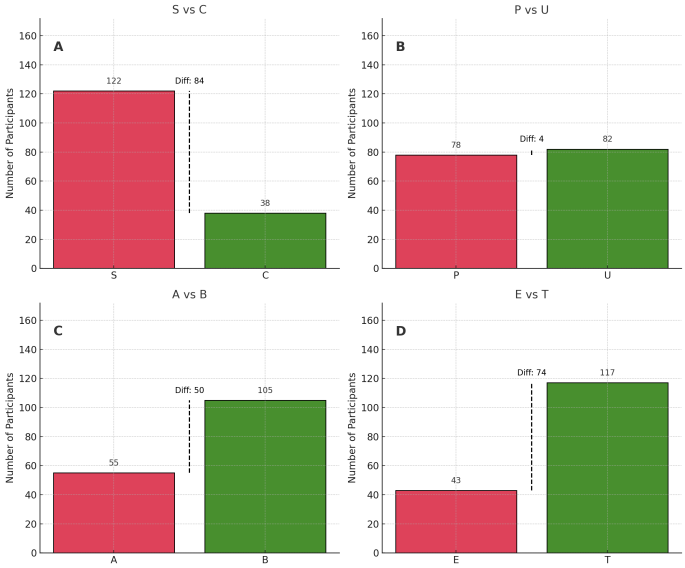


Fig. 4: Distribution of Participants across each Dimensions

### B. Gender/eMBTI Correlation

The Chi-Squared test was conducted to determine whether there is a significant association between gender and MBTI types. The calculated Chi-Squared value was 0.977, which was compared against the critical value from the Chi-Squared distribution with 30 degrees of freedom at a significance level of 0.05. The critical value for this test was 43.77. Since the calculated value (0.977) is substantially smaller than the critical value (43.77), the null hypothesis cannot be rejected. This indicates that the observed distribution of MBTI types across gender categories does not significantly differ from what would be expected by chance, suggesting no statistically significant correlation between gender and MBTI types in the dataset.

### C. MBTI/eMBTI Correlation

The Chi-Squared test was conducted to examine whether there is a significant difference between the observed and expected values in the dataset. In this case, we used 128 inputs compared to the original 160 as 32 students did not provide us with their MBTI. The calculated Chi-Squared value was 0.877, which was compared against the critical value derived from the Chi-Squared distribution with 225 degrees of freedom at a significance level of 0.05. The critical value for this test was 270.75. Since the calculated value (0.877) is substantially smaller than the critical value (270.75), the null hypothesis cannot be rejected. This suggests that the observed values do not significantly differ from the expected values, indicating that there is no statistically significant correlation between the two variables, MBTI and eMBTI types. (Figure 5) Thus, the data does not support the presence of a meaningful association between the two variables under the given conditions.

| | E | I | N | S | F | T | J | P |
|---|---|---|---|---|---|---|---|---|
| CPAE | 0 | 3 | 2 | 1 | 2 | 1 | 2 | 1 |
| CPAT | 1 | 2 | 1 | 2 | 3 | 0 | 2 | 1 |
| CPBE | 1 | 3 | 3 | 1 | 3 | 1 | 2 | 2 |
| CPBT | 6 | 3 | 6 | 3 | 3 | 6 | 3 | 6 |
| CUAE | 0 | 2 | 2 | 0 | 2 | 0 | 2 | 0 |
| CUAT | 3 | 1 | 4 | 0 | 3 | 1 | 3 | 1 |
| CUBE | 1 | 4 | 4 | 1 | 2 | 3 | 1 | 4 |
| CUBT | 1 | 3 | 4 | 0 | 2 | 2 | 1 | 3 |
| SPAE | 2 | 4 | 6 | 0 | 3 | 3 | 3 | 3 |
| SPAT | 8 | 8 | 10 | 6 | 7 | 9 | 9 | 7 |
| SPBE | 0 | 3 | 3 | 0 | 0 | 3 | 2 | 1 |
| SPBT | 10 | 11 | 17 | 4 | 10 | 11 | 12 | 9 |
| SUAE | 3 | 2 | 4 | 1 | 5 | 0 | 2 | 3 |
| SUAT | 4 | 4 | 6 | 2 | 5 | 3 | 2 | 6 |
| SUBE | 3 | 3 | 4 | 2 | 2 | 4 | 4 | 2 |
| SUBT | 11 | 18 | 27 | 2 | 13 | 16 | 16 | 13 |

Fig. 5: Heat-map between MBTI and eMBTI values

### D. Question related analysis

The results on participants' answers per individual questions (Appendix III) revealed distinct patterns highlighting

their ethical priorities, risk considerations, and collaborative tendencies.

The False Business Trip scenario, where participants faced a dilemma of refusing unethical practices, 60% (scores of 1-2) agreed with addressing the issue, while 25% remained neutral (score of 3) and 15% disagreed (scores of 4-5), reflecting hesitation due to fear of isolation or conflict. In the Unfair Grading Assessment scenario, the majority, 65% (scores of 1-2), agreed with challenging unfair grading, while 20% remained neutral and only 15% disagreed (scores of 4-5), showing how participants chose fairness despite potential conflict with professors. For the Research Topic Dilemma, 40% agreed (scores of 1-2) to stick to their original topic, prioritizing personal passion, while 30% were neutral and another 30% disagreed (scores of 4-5), indicating a balance between personal goals and pragmatic outcomes.

In the Power Harassment scenario, 45% (scores of 4-5) disagreed with tolerating harassment, showing a strong preference for addressing unethical practices, while 30% (scores of 1-2) agreed with tolerating the situation for career benefits, and 25% remained neutral. The University Event Leadership scenario saw 55% (scores of 1-2) agreeing with asserting their vision, prioritizing efficiency, while 25% were neutral and 20% (scores of 4-5) disagreed, reflecting a preference for individual leadership over inclusivity. In the Student Fund Allocation scenario, 60% (scores of 1-2) agreed with allocating resources for broad student welfare, while 20% were neutral and another 20% disagreed (scores of 4-5), highlighting a collective welfare mindset.

For the Allocation of Meeting Expenses scenario, 70% (scores of 1-2) agreed with reallocating funds for personal research, while 20% remained neutral and 10% disagreed (scores of 4-5), reflecting a strong practical and self-serving approach. In the Scholarship Competition Dilemma, responses were evenly split, with 35% (scores of 1-2) agreeing with focusing on their own goals, 30% neutral, and 35% (scores of 4-5) disagreeing to prioritize helping a friend, indicating internal conflict between altruism and self-interest.

In the Supporting a Teammate in Crisis scenario, 55% (scores of 1-2) agreed with offering flexibility to the teammate, demonstrating a collaborative mindset, while 30% remained neutral and 15% (scores of 4-5) disagreed, reflecting some concerns about project timelines. For the Illegal Laboratory Fund scenario, 60% (scores of 4-5) disagreed with contributing to unethical practices, 20% remained neutral, and 20% (scores of 1-2) agreed, highlighting strong ethical compliance. In the Campus Protest Participation scenario, 45% (scores of 4-5) disagreed with participating in protests, prioritizing academic stability, while 30% (scores of 1-2) agreed and 25% were neutral, showing hesitancy in balancing activism with personal consequences. Finally, in the Research Assistantship Decision scenario, 55% (scores of 4-5) disagreed with taking the riskier role, favoring stability, while 25% agreed (scores of 1-2) and 20% were neutral, reflecting participants' risk-averse tendencies.

## VI. Discussion

In this study, we were able to gather at least one response from each of the 16 eMBTI types, which allowed us to examine the distribution of responses across all types. A noticeable difference was observed between users who identified as "S" (Self-Direction) and those who identified as "C" (Conformity), as well as between "T" (Stimulation) and "E" (Security) types. This would emphasize university student nature of being more independent and risk-taking

When analyzing the data, the Chi-Square test revealed that there is no significant correlation between the MBTI type or the gender and the eMBTI type. However, we still noticed that the p-value between MBTI/eMBTI was lower, indicating a closer relationship compared to gender/eMBTI. We believe that the lack of a significant result can be attributed to the relatively small sample size we were able to collect, alongside the high degrees of freedom in our analysis. Specifically, the MBTI type consists of 16 categories, which leads to a high number of degrees of freedom and subsequently reduces the significance of the correlation. Given these factors, a sample size at least double the size of the current one would be necessary to achieve more reliable and meaningful conclusions. With a larger dataset, we would have a clearer understanding of potential correlations between MBTI types, gender and eMBTI.

In addition, the results on individual questions reveal distinct patterns of behavior, showing participants' tendency to balance ethical principles and practical considerations in decision-making. A strong commitment to ethical compliance was evident, particularly in rejecting unethical practices such as in the False Business Trip and Illegal Laboratory Fund dilemmas. However, participants often showed risk avoiding tendencies, favoring stability and predictability where academic security outweigh high-risk choices. Also, collaboration were also prioritized reflecting a preference for teamwork and group benefit over individual gains. At the same time in scenarios like the Research Topic Dilemma and Allocation of Meeting expenses participants favored practicality and outcomes over idealism. Internal conflicts emerged in dilemmas such as the Scholarship Competition, highlighting the tension between altruism and self-interest. Overall, students strive to uphold ethical values and foster collaborations while navigating academic pressures often prioritizing stability, practicality, and collective welfare in their decision-making.

## VII. Conclusion

*EthicsQuest* highlights the importance of providing students with opportunities to explore their values and enhance their ethical decision-making skills. By leveraging Schwartz's Theory of Basic Values and presenting interactive, real-life scenarios, the platform allows students to engage with ethical dilemmas in a practical and thought-provoking manner. Unlike traditional tools that focus primarily on personality traits, *EthicsQuest* emphasizes the dynamic role of personal values, offering a deeper and more personalized approach to understanding moral reasoning. This value-driven framework

enables users to navigate complex ethical situations with greater awareness of their motivations and priorities.

The analysis of the data collected through the platform offered valuable insights into how students approach ethical dilemmas. While no significant correlation was found between MBTI and eMBTI types, this result underscores the complexity of ethical decision-making and the need for further exploration of how values interact with personality in guiding behavior. The study's limitations, including a relatively small sample size and focus on a single institution, suggest that expanding the participant pool and refining the data collection process would enhance the robustness and applicability of future findings. Such efforts could provide deeper insights into ethical reasoning across diverse contexts and cultural settings.

Overall, *EthicsQuest* demonstrates its potential as a valuable tool for fostering ethical awareness and encouraging self-reflection among students. By creating an engaging and accessible platform, it bridges theoretical understanding with practical application, equipping students with the skills to navigate moral challenges in their academic and professional lives. With continued development, including collaboration with experts and expansion to broader populations, *EthicsQuest* could become a widely used resource for promoting ethical learning and cultivating responsible decision-makers in diverse environments.

## VIII. Limitations

While *EthicsQuest* represents a thoughtful and innovative approach to exploring ethical decision-making, several limitations should be acknowledged. First, our team is not specialized in human behavior or ethics, which may affect the depth of our findings. Despite this, we were committed to conducting the study with diligence and aimed to raise awareness about ethical decision-making among students. Additionally, the study focuses exclusively on KAIST students, potentially limiting the generalizability of the findings to broader populations.

Another limitation involves potential response biases, where students might answer survey questions in ways that align with social norms rather than their true behavior. This could affect the accuracy of the ethical MBTI types calculated. Moreover, the study reduces Schwartz's comprehensive framework to four pairs of values, simplifying the nuanced nature of ethical reasoning for usability purposes. While this approach improves engagement, it may inadvertently exclude certain dimensions of decision-making. The scenarios, though carefully designed, may not fully capture the complexity of real-world ethical dilemmas. Finally, while rigorous testing was conducted, the algorithm's logic may oversimplify or misinterpret participant responses, highlighting the need for future refinement.

## IX. Future Work

To address the limitations outlined, future iterations of this project could involve collaboration with experts in ethics and psychology to enhance the depth of analysis. Expanding the participant pool to include diverse populations from other universities and cultural contexts would improve the generalizability of findings. Refining the algorithm and incorporating more nuanced scenarios could also provide a more comprehensive exploration of ethical decision-making.

This project could be extended across institutions to compare ethical perspectives between different academic and cultural environments. A potential avenue for future research includes exploring correlations between participants' existing MBTI types and their calculated ethical MBTI types, offering insights into how personality and values interact in ethical reasoning.

Additionally, the platform could be transformed into an educational tool by adding resources like interactive ethics comics and educational modules. These features would deepen users' understanding of ethical principles, making *EthicsQuest* both a self-reflection tool and an engaging platform for ethics education. Through these enhancements, *EthicsQuest* has the potential to become a comprehensive resource for fostering ethical awareness.


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## Appendix

In the following table, we provide more detailed information about the user demographic.

| Category | Count |
|---|---|
| **Gender** | |
| Female | 73 |
| Male | 85 |
| Other | 2 |
| **Major** | |
| Bachelor | 106 |
| Master | 32 |
| PhD | 20 |
| Other | 2 |
| **Department** | |
| Aerospace Engineering | 10 |
| Bio and Brain Engineering | 9 |
| Biological Sciences | 7 |
| Business and Technology Management | 11 |
| Chemical and Biomolecular Engineering | 8 |
| Chemistry | 3 |
| Civil and Environmental Engineering | 12 |
| Computer Science | 51 |
| Culture Technology | 1 |
| Data Science | 2 |
| Digital Technology | 1 |
| Electrical Engineering | 10 |
| Industrial and Systems Engineering | 6 |
| Industrial Design | 5 |
| Languages and Markets | 1 |
| Materials Science and Engineering | 3 |
| Mathematics | 4 |
| Mechanical Engineering | 3 |
| Other | 8 |
| Physics | 4 |
| The Robotics Program | 1 |

TABLE I: Demographic Data of Quiz Respondents

The following table provides a summary of the MBTI types and their descriptions used in *EthicsQuest*. Each type represents a unique combination of values and ethical perspectives.

The table below summarizes the scenarios included in *EthicsQuest*. Each scenario is carefully designed to reflect ethical dilemmas commonly faced by students in a university setting.

TABLE II: MBTI Types and Descriptions in *EthicsQuest*

| **Type** | **Title** | **Description** |
|---|---|---|
| SPAT | Independent Achiever | You value creativity, personal success, and the thrill of leadership. You thrive on taking initiative and setting ambitious goals, often challenging conventions to achieve progress while prioritizing individual autonomy. |
| SPAE | Strategic Leader | You value independence, power, and well-thought-out plans. You ensure actions align with long-term goals, balancing ambition with responsibility to achieve structured yet impactful outcomes. |
| SPBT | Adventurous Leader | You blend leadership skills with boldness, valuing independence, influence, and excitement. You embrace risks to achieve progress while supporting others through ethical decision-making. |
| SPBE | Protective Leader | You value independence, strong relationships, and creating supportive environments. You balance assertiveness with compassion to empower others while maintaining stability. |
| SUAT | Innovative Idealist | You value creativity, social equality, and ambitious pursuits. You champion causes that promote fairness and inclusivity, striving for a better future through innovative solutions. |
| SUAE | Pragmatic Idealist | You blend idealism with realism, valuing harmony, creativity, and balanced progress. Your ethical decisions focus on meaningful changes within stable structures. |
| SUBT | Visionary Caregiver | You value compassion, independence, and adventure. You advocate for bold but considerate actions, combining a sense of wonder with creativity to make a meaningful difference. |
| SUBE | Supportive Caregiver | You value stability, kindness, and inclusivity. Your ethical decisions prioritize fostering a nurturing environment and ensuring the well-being of those around you. |
| CPAT | Competitive Performer | You value personal success, social norms, and structured achievements. You thrive in environments where recognition and ambition coexist with societal expectations. |
| CPAE | Structured Achiever | You value discipline, stability, and goal-oriented success. You focus on maintaining order and achieving results through structured progress. |
| CPBT | Risk-taking Protector | You take bold steps to defend and uplift others, valuing power, compassion, and adventure. Your ethical decisions balance risks with the potential for significant positive impact. |
| CPBE | Traditional Protector | You value security, conformity, and strong relationships. Your ethical decisions prioritize stability, consistency, and safeguarding the people and values you hold dear. |
| CUAT | Social Innovator | You value inclusivity, ambition, and working within social norms to drive change. Your ethical decisions balance tradition with innovation to achieve sustainable progress. |
| CUAE | Responsible Reformer | You value stability, inclusivity, and thoughtful progress. Your ethical decisions aim to harmonize structure with fairness, focusing on tangible outcomes. |
| CUBT | Inclusive Pioneer | You value adventure, compassion, and breaking barriers to achieve equality. Your ethical decisions emphasize creating opportunities for all and embracing novel solutions. |
| CUBE | Traditional Nurturer | You value stability, kindness, and preserving social harmony. Your ethical decisions focus on fostering trust, protecting values, and creating supportive communities. |

TABLE III: Scenarios in *EthicsQuest*

| **Scenario Title** | **Description** |
|---|---|
| False Business Trip | As a student, you discover that some of your lab colleagues are claiming travel allowances for business trips they didn't take. They encourage you to do the same, assuring you it's a common practice and an easy way to earn extra money. Refusing might isolate you from your peers and affect your collaborations within the lab. |
| Unfair Grading Assessment | As a student, you receive your grade for a recent assignment and strongly believe it was assessed unfairly by your professor. You have valid reasons and evidence to support your viewpoint. Addressing the issue could lead to a better grade but might strain your relationship with your professor. |
| Research Topic Dilemma | You are working on a paper about your favorite topic. Your professor suggests switching to a more popular subject that's easier to get accepted into a conference or journal. Following their advice could enhance your publication prospects but means abandoning your initial passion. |
| Power Harassment | In your lab, professors frequently assign personal tasks to graduate students and create a stressful environment. Confronting this behavior could jeopardize your relationships and limit your opportunities for advancement, while staying silent allows unethical practices to continue. |
| University Event Leadership | As president of your university's Community Service Club, you developed a comprehensive plan for an event. Club members suggest adopting a more collaborative planning process. While their approach could foster team morale, it might also delay preparations. |
| Student Fund Allocation | As president of your university's Student Government Association, you can either allocate funds to host exclusive networking events or expand student support services like mental health programs. The former enhances your leadership and the SGA's status, while the latter benefits the student body. |
| Allocation of Meeting Expenses | You have access to meeting funds for your research team. Reallocating some of these funds to personal meals could help you focus on your projects but may affect team activities and collaborations. |
| Scholarship Competition Dilemma | You are applying for a scholarship alongside a close friend who also needs it. Sharing study resources could improve their chances but might reduce your own. |
| Supporting a Teammate in Crisis | You are working on a group project when a teammate faces a personal crisis. Offering flexibility could support them but might impact the project's timeline and quality. |
| Illegal Laboratory Fund | As a new graduate student, senior members ask you to contribute to an informal fund for organizing events. Contributing could help build relationships and advance your career, while declining might limit your opportunities. |
| Campus Protest Participation | A protest on campus supports a cause you deeply believe in. Joining may lead to disciplinary action or strain your scholarship sponsor relationship, while not participating might leave you feeling you didn't stand up for your beliefs. |
| Research Assistantship Decision | A professor offers a high-risk, high-reward research assistantship that demands extensive time but promises significant findings, potentially disrupting your GPA. Alternatively, a safer assistantship offers stability and balanced workload. |