Project Proposal

When I grow up, I would like to be a chief technology officer, chief decision scientist, AI advisor or whatever, you name it. A famous statement that every little human being at some point in life says while dreaming of their future. Sometimes it happens so and sometimes the system misaligns them and throws them into courses they never imagined of. This article is my project proposal. The project seeks to address the persistent challenge of aligning students with educational courses that truly fit their academic capabilities, personal interests, socioeconomic circumstances, and other individual factors. Brown, Hesketh and Williams S(2019, pp.1-5) states that there is a lot of mismatch between education and job markets and that it is important to align personal capabilities with career opportunities. Misaligned course placements often lead to wasted time, resources, and unfulfilled potential. A report by Taras.D.(2023) highlights the increasing importance of personalized education systems that integrate data-driven tools to guide students towards pathways best suited for their strengths and interests. Thus, through using the technological approach to this project, a multi-dimensional approach may be used to generate an algorithm that will identify the kind of courses that may suit the student better based on each student's profile. The ultimate aim is to improve working efficiency, personal and prolonged effectiveness of the students themselves as well as institutional effectiveness while promoting effectiveness in education.

The idea for this project came from personal experiences that revealed the shortcomings of the current system. A friend's journey, which led to pursuing two different bachelor's degrees due to an initial misalignment, highlighted the financial and emotional costs associated with ineffective placements. Another instance occurred when I helped my sister select courses for consideration by the ministry of education. Our approach was limited to academic grades and personal preferences, neglecting other critical factors like her character and hobbies. These experiences inspired the idea of a comprehensive placement algorithm, one that factors in academic, social, and personal elements. That way, there is hope that such a system would reduce the number of mismatches, placing students in a right track.

On considering the feedbacks that had come with the first draft of this work, I realized that this work engages the ethical and philosophical consideration. Questions such as, "What is the future of good education?" and "Who decides what is good?" were raised, as the focus of this study was on careful action research that involves a close cooperation between the researcher and the practitioners. Therefore, there is an expansion of my way of thinking in terms of mutuality and stakeholders' engagement in the course of the project. This change of stance guarantees that the proposed algorithm will be efficient as well as fair and will consider various opinions and ethical aspects.

The methodology I intend to adopt for this project is a mixed research method. Primary data will be gathered from historical records of the institution, academic performance records of students, and end-of-semester feedback forms filled by students. Therefore, the algorithm will be created and, using the collected data, will be refined based on the users' feedback. This approach helps in achieving a good combination of quantitative analysis and qualitative depth needed in providing the best understanding of the factors that go with course placements. There are,

however, some limitations to the methodology adopted for this study. O'Neil (2016, pp. 13-15) states that ethical concerns and potential biases in algorithms are issues that are common to big data and almost unavoidable. Similarly, Flick (2018) highlights that the reliability of qualitative methods often depends heavily on the context and the integrity of the data collection process. Bias in data gathering and other possible ethical issues with reference to the application of the algorithm are among the challenges that will be addressed by expanding the sample database and ensuring compliance with ethical standards. Moreover, Creswell and Plano Clark (2017) emphasize that mixed methods allow researchers to capture a fuller picture of the phenomena being studied, making them particularly useful for addressing complex, multi-faceted problems.

I want to develop leadership skills as leadership will be central in managing this project. One of the issues would be the identification of how to engage students, educators, and policy makers in a way that the algorithm would incorporate their needs and values. This at the same time will enhance my ability to communicate with different levels of stakeholders. Also, the project entails a clear and fair decision process and the policy of fair treatment of all participants. In this way, I would like to gain deeper knowledge of ethical leadership and such matters as trust and creating common vision(Ciulla, 2004).

The success of this project will depend on the contributions of various stakeholders. Students and their parents will provide essential data and feedback, while educators and counselors will guide the identification of critical factors for placement. The ministry of education will play a key role in evaluating the system's potential for broader implementation, and technology experts will contribute to the development and scalability of the algorithm. As Bryson (2004) highlights, effective stakeholder engagement is crucial for the success of complex projects, ensuring that all perspectives are considered in the decision-making process.

This reflective process has deepened my understanding of the project's complexity and its potential for impact. By focusing on collaboration, inclusivity, and ethical considerations, I aim to create an algorithm that is not just a tool for placement but a transformative solution for improving education systems. The hope is that students can be aligned with paths that maximize their potential, ultimately contributing to a more productive and fulfilled society.

References

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