



BSc. in Software Engineering

Course Name: Ethics in Software Engineering

Assignment Name: Summative Part One

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Empowering Refugee Talents: A Digital Platform for Advancing Education and Employment Opportunities for Competent Individuals

Introduction

Rwanda is one of the countries that hosts a lot of refugees. According to Dukuzumuremyi (2024), Rwanda hosts over 135,000 refugees across different camps like Mahama, Kiziba, Mugombwa, and Kigeme. Although the government of Rwanda has been promoting inclusive refugee policies, securing a good job or continuing education is still a dream that is out of reach for many skilled and talented refugees due to financial and legal barriers (UNHCR, 2025). To address this gap, this research proposes to develop a digital platform that will be used to connect skilled individuals and academically talented students to employment and educational opportunities. On the other hand, this platform raises different ethical concerns that need to be carefully considered while developing this platform.

Ethical Considerations

Before starting the project or collecting any information, I will seek official permission from the African Leadership University Ethics Committee and the main organizations that are in charge of refugees in Rwanda, such as UNHCR and MINEMA.

One of the key ethical issues involves data management and storage. For the effectiveness of this platform, we will need to collect personal information such as educational level, employment history, skills, and talents of refugees in selected camps. Therefore, to ensure the security and privacy of user data, all information will be anonymized and encrypted before storing it in secure and controlled servers. Furthermore, no data will be collected or stored without the full consent of the users, which respects Rwanda's local data protection regulations. While learning how this platform can help refugees to maximize available opportunities, it is possible that we can find hidden issues in the existing system that help refugees, for example, academically talented students who are not officially registered as refugees or unfair distribution of education and employment opportunities in refugee camps. In this case, the information will be kept confidential and reported to the relevant organizations for correction instead of sharing the information in public. While implementing this project, any reused resources will be appropriately cited and licensed under ethical software development practices. During the implementation of the project or data collection, special attention will be paid to avoid any psychological harm, either through the platform's language or any sensitive communication like undermining or offending participants, while collecting data in selected camps.

This research will also avoid anything that can negatively affect society or anything that can affect the employment status of participants negatively. All the information will be kept with top secrecy and confidentiality and will not be shared or published with potential employers.

investors without the user's consent. In the same way, access to records of personal or confidential information will be controlled and guided by ethical data-sharing agreements with involved institutions. Additionally, this research will not mislead the participants for the sake of increasing the participants, like promising participants scholarships or employment, as this can lead to disappointment if participants do not receive or benefit from the platform directly. It is also possible that a sponsor may come with the desire to help students continue their studies, and funds may later become limited or stop. Careful consideration should be given to the ability of the sponsor to ensure that the student will also get the basic needs required for a better learning environment. It can leave the participants in a worse position than before if the support ends in the middle, as they have invested their time and effort into something that disappears.

Last but not least, due to the lack of local job networks and the urgent need for income, refugees are more exposed to exploitation. In response to this, participants should be educated about their labor rights and ensure that opportunities respect human rights and labor standards. Also, this research will be guided by and follow all local rules and guidelines for research, including Rwanda's national ethics rules and UN Refugee Agency policy from 2015, to ensure everyone's rights, privacy, and dignity are respected and protected.

Considering all points, addressing all ethical considerations that may arise from this research project will require continuous reflection, a strong partnership with refugee communities and local authorities, and a flexible approach focusing on participants' well-being and long-term empowerment.

Integration of Ethical Morals and Professional Conduct

During the implementation and development of this digital platform that will empower refugee talents in Rwanda, it is very crucial to apply ethical morals and professional conduct through different stages of research and development of the project. Based on the sensitivity of the target population, possible risks of handling personal data, and expectations. Applying ethical morals and professional conduct will not only protect participants' data but also promote fairness, accountability, and inclusivity.

Ethical Morals Integration

One of the key ethical considerations in this project is the practice of informed consent. All users of this platform will be informed about the purpose of this research, the problem we are trying to solve, how their data will be used, and their right to withdraw from the project at any time without any penalty. In cases involving minors, we will contact their parents or legal guardians for consent to ensure that participation is both voluntary and legally authorized. Furthermore, all participants will be treated with honor, fairness, and respect (Ruffini, 2022), and we will strictly avoid any form of labeling or categorization that could lead to stigmatization.

In the same way, the platform aims to help refugees maximize available opportunities and minimize harm. Additionally, this project structure and accessibility will be guided by justice and equity, ensuring that all refugees can use the platform without being excluded based on gender or age. Personal information collected through the different project life cycles will be kept private and confidential. Therefore, sensitive information such as academic history or legal documents will only be shared with third parties, such as employers or sponsors, when the participant gives consent.

Professional Conduct Integration

This project will fully follow N° 058/2021 of 13/10/2021, relating to Rwanda's Data Protection and Privacy (Republic of Rwanda, 2021), on a professional level. This law states that personal data must be collected lawfully, securely stored, and used only for clearly stated purposes. I will strictly follow this rule to ensure that all data is used effectively during or after the project.

According to the Association for Computing Machinery (2018), any usage of existing algorithms or code snippets will be effectively cited, except open source or commercially permitted code. To maintain transparency with stakeholders, I will engage with organizations responsible for refugees, refugee leaders, and educational institutions to collect information and input that will help in making decisions related to system design, content, and feature accessibility.

Project plan and Timeline

| Phase | Activity | Duration (Weeks) | Month |
|------------------------------------|--|------------------|-------------------------|
| Phase 1: Writing Research Proposal | <ul style="list-style-type: none"> ✓ Idea generation ✓ Abstract ✓ Chapter one ✓ Chapter two ✓ Chapter three | 2 | Month 1 Weak 1-2 |
| Phase 2: Prototype development | ✓ Figma design | 4 | Week 2-6 |

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| | <ul style="list-style-type: none"> ✓ Front-end development ✓ Backed development and Integration | | |
| Phase 3: Testing and Analysis | <ul style="list-style-type: none"> ✓ User testing and feedback collection ✓ Analyzing the collected data ✓ Final report writing | 2 | Month 2 Week 6-8 |

Stakeholder Impact

To ensure the effectiveness of our platform, this project will work closely with different stakeholders, including refugees, educational institutions, potential employers, humanitarian organizations such as UNHCR and MINEMA, and government agencies. This platform will help refugees connect to educational institutions and employment opportunities. Similarly, it will help non-governmental organizations that are in charge of empowering refugees in their work, stopping sponsors from wasting time trying to find talented individuals.

Ethical Frameworks Guiding the Research

For the successful implementation of this platform that supports talented refugees in Rwanda, adherence to ethical frameworks that protect vulnerable populations, such as refugees, and ensure there is integrity through research is necessary. This project will follow both local and international ethical rules to make sure we always respect people's dignity, privacy, fairness, and honesty.

At the national level, the Rwanda Data Protection and Privacy Law (Law No. 0582021) will be the basis for all data handling procedures in this project (Republic of Rwanda, 2021). Internationally, the Belmont Report (1979) provides key ethical principles that will shape the entire research design: respect for persons, beneficence, and justice. "Respect for persons" underscores the importance of informed consent and voluntary participation, especially among vulnerable groups like refugees (U.S. Department of Health & Human Services, 2018).

References

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