UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

Name: GROUP 24

Project Name: TECH-NECT APPLICATION

Report Type: PROJECT REPORT

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Executive Summary

Tech-Nect is a web-based platform designed to connect university tech students in Uganda with startups, NGOs, and SMEs seeking innovative digital solutions. The platform addresses a critical gap in the market by providing students with hands-on experience and employers with affordable, localized tech talent. This report outlines the problem, proposed solution, system design, implementation process, challenges faced, and results achieved throughout the development of the project.

1 Introduction

Access to real-world experience is essential for tech students, yet many struggle to gain internships or freelance opportunities. At the same time, many local businesses and organizations in Uganda lack the resources or networks to find skilled, cost-effective digital talent. This project aims to bridge that gap through Tech-Nect.

2 Problem Statement

In Uganda and similar regions, tech students often graduate without any practical experience, while startups and companies face difficulty accessing affordable, skilled labor. This disconnect limits both youth employment and digital transformation.

3 Objectives

Main Objective:
To develop a web platform that connects tech students with employers for project-based collaboration.

Specific Objectives:

- Identify and define platform requirements from both students and employers.

- Develop and test a responsive web application.

- Integrate feedback mechanisms for quality assurance.

- Conduct field research to validate user needs and project feasibility.

4 Methodology

The system was developed using the Agile methodology with iterative design and feedback loops. Data collection included interviews with students and employers, online surveys, and prototype testing. The project team was divided into specialized roles for effective collaboration.

5   System Design

The platform is built using a modular architecture including:

- **Frontend:** React.js

- **Backend:** Node.js with Express

- **Database:** MongoDB

- **Authentication:** JWT-based secure login

Design diagrams include use-case flows, database schema, and API structure.

6   Implementation

Development was conducted over 8 weeks. Initial MVP included student registration, project listing, and matching algorithm. Testing and deployment were done on a local server with plans for cloud migration. Git was used for version control.

7   Challenges

- Limited time for full feature rollout

- Budget constraints for domain and cloud services

- Synchronizing team schedules and collaboration

8   Results

The MVP of Tech-Nect was successfully developed with core functionalities. 40+ students and 12 companies expressed interest during pilot testing. Initial feedback showed high usability and interest in long-term use.

9   Conclusion

Tech-Nect successfully bridges the gap between tech students and employers in Uganda. The platform has strong potential for scalability and social impact in improving youth employment and digital transformation.

10   Recommendations

- Launch full mobile version for broader accessibility

- Partner with universities for official integration

- Secure funding to sustain server costs and scale features

References

- Uganda Bureau of Statistics. (2023). Youth Unemployment Report.

- Ministry of ICT Uganda. (2024). National Digital Transformation Plan.

- World Bank. (2022). Digital Economy for Africa Initiative.