2025

MOTOFIX

Asiimire Patricia

College: Makerere University, College of Computing and Information Sciences

I**nspiration**: Inspired by the delays caused by long-distance trucks on major border roads such as Jinja Road, Hoima Road, and the Northern Corridor of East Africa.

Development Process & Function: The project focuses on ensuring efficient traffic flow by addressing delays along the Northern Corridor, a crucial trade route in East Africa.

I**mpact of the Cadence Program**: Cadence has provided mentorship and a platform to develop and refine the project.

Current Stage: Development stage

Future Prospects: Expanding the solution to other roads across East Africa.

2025

AI-Enhanced Waste-to-Energy Recycling System

Segane Stuart

College: Makerere University, College of Computing and Information Sciences

Inspiration: Motivated by the Kitezi landfill tragedy, poor waste management, and the need for sustainable energy solutions.

Development Process & Function: The system uses AI-powered robotics to classify, sort, and process waste, converting it into renewable energy.

Impact of the Cadence Program: The program provided mentorship, technical support, and networking opportunities, helping to refine the project.

Current Stage: Prototype development

Future Prospects: Expanding renewable energy sources, refining AI models, and integrating blockchain for waste tracking and energy distribution.

2025

AI-Driven Predictive Power Management System

Michael Tumuhaise & Heli Prajapati

College: Makerere University, College of Computing and Information Sciences

Inspiration: Addressing energy inefficiency and unexpected power outages in Uganda's prepaid electricity system (Umeme Yaka).

Development Process & Function: Used AI and IoT to monitor electricity usage in real time, helping households optimize their consumption.

Impact of the Cadence Program: The program offered insights into sustainability, ethical design, and business development.

Current Stage: Final stage – implementation and project presentation

Future Prospects: Enhancing real-time data precision with smart sockets and expanding to a wider user base.

2025

ECOFRIEND

Ainebyoona Oscar- Team lead

College: Makerere University, College of Engineering, Design, Art, and Technology

Inspiration: Passion for creating a cleaner and greener community environment.

Development Process & Function: A mobile app that helps users manage waste effectively.

Impact of the Cadence Program: Provided funding, mentorship, and exposure to innovation challenges.

Current Stage: Testing and Refinement

Future Prospects: Expanding the app for use by waste management bodies and generating revenue.

2025

Solar Still with Photovoltaic System for Water Purification

Kihika Kyomuhendo and Mukasi Mark

College: Makerere University, College of Engineering, Design, Art, and Technology

Project Title: Solar Still with Photovoltaic System for Water Purification

Inspiration: A passion for using technology to solve real-world problems, particularly waterborne diseases in rural Uganda.

Development Process & Function: Designed and tested a solar-powered water purification system using MATLAB/SIMULINK simulations. To provide access to clean and safe water and substitute energy-intensive methods like boiling.

Impact of the Cadence Program: Provided financial support, mentorship, and commercialization training.

Current Stage: Fine-tuning the prototype and preparing for investor pitching.

Future Prospects: Scaling the project to impact communities lacking access to clean water.

2025

ML-Powered Irrigation System for Sustainable Agriculture

Amwine Nickson & Kakeeto Francis Creavins

College: College of Engineering, Design, Art, and Technology

Inspiration: Addressing the high water and labor costs associated with farming, especially during prolonged dry seasons.

Function: Uses AI and machine learning to automate irrigation, optimizing water and labor costs.

Impact of the Cadence Program: Provided funding, mentorship, and industry connections.

Current Stage: Rapid prototyping and moving toward field tests.

Future Prospects: Iterating on the prototype based on farmer feedback and scaling through investor pitching.

2025

Recycled Paper Phone Case (Ecophone)

Atuhaire Trevor Wamara- Team lead

College: College of Engineering, Design, Art, and Technology

Inspiration: The growing plastic waste problem and the need for sustainable alternatives.

Function: Converts recycled paper into biodegradable phone cases as an alternative to plastic.

Impact of the Cadence Program: Provided mentorship and resources to integrate AI and sustainable practices into the project.

Current Stage: Prototype development, durability testing, and market entry strategies.

Future Prospects: Scaling production and expanding into other sustainable tech accessories.

2025

Water-Powered Pumping Machine

Blessed Antangaize Baguma

College: College of Engineering, Design, Art, and Technology

Inspiration: Addressing water shortages and improving water accessibility in rural communities.

Function: Uses hydraulic power to pump water without electricity, ensuring sustainability.

Impact of the Cadence Program: Provided funding, technical resources, and mentorship.

Current Stage: Prototype testing

Future Prospects: Expanding to serve more communities and integrating smart monitoring systems.

2025

AgroPlus – An AI-Powered Agricultural Monitoring System

Ijoot Anthony- Team lead

College: College of Engineering, Design, Art, and Technology

Inspiration: Addressing inefficiencies in farming due to climate change, soil degradation, and pest infestations.

Function: Uses AI, IoT, and computer vision to optimize irrigation, fertilization, and pest control.

Impact of the Cadence Program: Provided mentorship, workshops, and industry networking opportunities.

Current Stage: Prototype development and real-world testing.

Future Prospects: Expanding AI capabilities and forming partnerships with agricultural organizations.

2025

Remote Monitoring System for EV Chargers

Anyole Jared & Besigye Mukama

College: College of Engineering, Design, Art, and Technology

Inspiration: Observing the lack of technology to monitor and manage EV charging stations efficiently.

Function: IoT system that remotely tracks EV charger performance, enhancing efficiency and safety.

Impact of the Cadence Program: Provided funding, technical mentorship, and industry exposure.

Current Stage: Refining the prototype for deployment.

Future Prospects: Expanding the system for widespread EV infrastructure adoption.

2025

PhoenixLearn

Derrick Samuel Gyoga

College: Makerere University, College of Computing and Information Sciences

Function: It is an AI-driven e-learning platform designed to enhance personalized learning experiences. It addresses the limitations of traditional education by tailoring study materials to individual students' needs using adaptive AI models. The platform also provides teachers with analytics to track student performance effectively.

Impact of the Cadence Program: The Cadence Program has provided mentorship, technical guidance, and financial support, enabling the refinement of AI models, optimization of system efficiency, and access to advanced computing resources.

Current Stage: The project is in the prototyping and testing phase, where AI algorithms are being fine-tuned for optimal performance and accessibility.

Future Prospects: Expanding the platform with multilingual support, enhancing AI capabilities for better personalization, and partnering with educational institutions for wider adoption.

2025

Sortify

Muyama Monica

College: Makerere University, College of Computing and Informatics Technology

Function: It is a smart waste management system that integrates technology to improve sorting and recycling processes. Inspired by the growing waste crisis and personal experiences of finding clean recyclables, the project promotes efficient waste management and incentivizes responsible disposal.

Impact of the Cadence Program: Cadence has provided mentorship in business development, project management, and team leadership and helped refine Sortify into a viable business venture.

Current Stage:

The project is in the prototype development and testing phase, focusing on improving system functionality before moving to a pilot launch.

Future Prospects: Launching a fully functional platform for businesses and communities, Integrating blockchain technology for transparent incentive distribution, and expanding the marketplace to connect recycling companies with waste generators.

2025

The Smart Water Management System

Mbabazi Angel

College: Makerere University, College of Computing and Information Technology

Project title: The Smart Water Management System

Function: It is designed to monitor water usage, track consumption costs, and provide alerts about water shortages and pipeline leakages. The system utilizes sensors and AI-driven analytics to offer users real-time insights and predictive data.

Impact of the Cadence Program: The program has provided boot camps, business case development training, funding for sensor acquisition, and practice-pitching sessions to refine the project presentation.

Current Stage: The project is in the final testing phase, which ensures that all functionalities operate correctly before the final presentation.

Future Prospects: Partnering with the National Water and Sewerage Corporation for widespread adoption.