MUKWAYA ARTHUR NOA

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RESEARCH INTERESTS

- Traffic analysis and modelling
- Intelligent Transportation Systems
- Connected and Autonomous Vehicles
- Traffic Operations and Safety
- Pavements

TECHNICAL SKILLS

- **Computer**: Python, C++, Robot Operating System (ROS), Microsoft Excel, Word and PowerPoint
- **Packages:** Sci-kit- Learn, NumPy, SciPy, Pandas, Jupyter Notebook and Matplotlib
- **Soft wares:** Auto ware, AWSIM, VisSim, Civil 3D
- Machine Learning and Computer Vision

CERTIFICATES AND AWARDS

- Traffic Safety Scholar 2025 – LifeSavers Conference on Road Safety.
- Opportunity Funds Program - Education USA Scholar Recipient (July 2023)
- Certificate in Computer science (CS50X), Harvard University (June 2023)
- Certificate in Machine learning using Python, IBM (Feb 2023)

PROFESSIONAL MEMBERSHIP

- Institute of Transportation Engineers (ITE) Student Member, Aug 2024 - Present
- National Society of Black Engineers (NSBE) Student Member, Aug 2024 - Present
- American Society of Civil Engineers (ASCE) Student Member, Aug 2024 – Present
- Institute of Electrical and Electronics Engineers (IEEE) Student Member Dec 2022

EDUCATION

South Carolina State University Aug 2024 – Present
Master of Science in Transportation Engineering
Cumulative GPA: 4.00/4.00

Kyambogo University Sept 2018 – Jan 2023
Bachelor of Engineering in Mechatronics Engineering
Cumulative GPA: 3.76/4.00

PROFESSIONAL EXPERIENCE

Graduate Research Assistant – South Carolina State University, Aug 2024 – Present

- Working on a research project to demonstrate and countermeasure cyber-attacks in autonomous vehicles.
- Currently leading a team in semi-automatic annotation and labelling of our collected off-road datasets for autonomous vehicle navigation.
- Researching about short term traffic counts in relation to the time and season to carry out the exercise.

Undergraduate Research - Design and simulation of a charging system for electric vehicles using magnetic resonance, Sept 2022 - Jan 2023

- Conceptualized a multi vehicle charging system, designed a simulation model in Ansys Maxwell and analyzed its performance to determine the charging efficiency of the electric vehicles under different conditions.
- The increasing demand of electric vehicles in the world today can be met by this charging method as more countries are advocating for e-mobility.

Powertrain Systems Engineering Trainee - Kiira Motors Corporation, Summer **Internship**, April 2022 – July 2022

- Carried out test protocols and experiments to evaluate powertrain systems' reliability and functionality.
- Designed electrical system wiring diagrams using AutoCAD Electrical.
- Installed the harnesses for the chassis main, automatic transmission, and electric fuel injection systems.
- . Develop high voltage and low voltage wire harnesses during the vehicle development cycle.
- Provide engineering procedure and analysis used for troubleshooting system hardware and control software.