

Diandry A. Rutayisire

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EDUCATION

Vanderbilt University, Nashville, TN

GPA: 3.2/4

B.S., Computer science

Expected: May 2021

RELEVANT COURSEWORK

Software Design Patterns

Data Structures

Discrete structures

Operating systems

Algorithms

Statistical pattern recognition

Computer Networking

Parallel Functional Programming

Programming languages

PROFESSIONAL EXPERIENCE

Institute for Software Integrated Systems - Vanderbilt University

Undergraduate research assistant

May 2019 - May 2020

- Working on the implementation of path planning algorithms for a small car-like robot focusing on overtaking other cars and controlling the car at the limits of its tire's grip
- Refactored the existing codebase in C++ and Python using ROS
- Deployed neural networks trained in simulation to robots for real world testing against more traditional algorithms

CAMPUS INVOLVEMENT

Vanderbilt Emerging tech lab

Autonomous golf cart project

August 2019 -Present

Working on retrofitting a golf cart with a drive by wire system, perception, navigation, and planning for autonomous driving. Currently in charge of designing and building a safe braking system.

Vanderbilt Robotics

Programming team

August 2018 – May 2020

Implementing the mapping and navigation stack of a NASA lunabotics competition robot using ROS, Python, an Intel RealSense camera.

Vanderbilt Design Studio

Mentor

September 2018 – Present

Helps studio users with tool use, building techniques and 3D printing of parts

Vice president of equipment

November 2019 - Present

Maintains the studio's equipment and performs basic repairs if needed.

SKILLS

- Programming languages: (in order of proficiency) C++, Python, Java, Go
- Technologies: ROS, Git, Linux
- CAD: PTC Creo, Autodesk inventor, Onshape
- Machining: Lathe, Mill, Band saws, Offhand grinding
- Languages: English, French - Fluent, Kinyarwanda – Native