Diandry A. Rutayisire

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EDUCATION

Vanderbilt University, Nashville, TN   GPA: 3.1/4

B.S., Computer science   Expected: May 2021

RELEVANT COURSEWORK

Software Design Patterns	Data Structures	Discrete structures
Operating systems	Algorithms	Statistical pattern recognition

PROFESSIONAL EXPERIENCE

Institute for Software Integrated Systems - Vanderbilt University

Undergraduate research assistant   *May 2019 - present*

- 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 – Present*

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