Diandry A. Rutayisire

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EDUCATION

Vanderbilt University, Nashville, TN   GPA: 3.2/4

B.S., Computer science

RELEVANT COURSEWORK

Software Design Patterns	Data Structures	Algorithms
Operating systems	Statistical pattern recognition	Discrete structures
Computer Networking	Parallel Functional Programming	Programming languages

PROFESSIONAL EXPERIENCE

Institute for Software Integrated Systems - Vanderbilt University

Undergraduate research assistant   *May 2019 - May 2020*

- Worked 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
- Tested neural networks trained in simulation against more traditional algorithms.

CAMPUS INVOLVEMENT

Expected Value   *February 2021 - May 2021*

Backend developer

Worked on the backend of a product aimed at reducing patient readmittance in hospitals using Python and deployed to AWS. Set up and maintained CI and infrastructure for the whole project.

Vanderbilt Emerging tech lab

Autonomous golf cart project   *August 2019 -May 2021*

Worked 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 and new member education.

Vanderbilt Robotics

Programming team   *August 2018 – May 2020*

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

Vanderbilt Design Studio

Mentor   *September 2018 – May 2021*

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

*Vice president of equipmen*t   *November 2019 -November 2020*

Maintained the studio's equipment and performed basic repairs if needed.

SKILLS

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