

# Diandry A. Rutayisire

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## EDUCATION

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**Vanderbilt University, Nashville, TN**

GPA: 3.2/4

B.S., Computer science

## RELEVANT COURSEWORK

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

## PROFESSIONAL EXPERIENCE

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### 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

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### 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 equipment*

*November 2019 -November 2020*

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

## SKILLS

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- 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