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EDUCATION

Vanderbilt University: School of Engineering
Bachelor of Engineering: Computer Engineering
Minors: Engineering Management / Mathematics

May 2022

RELEVANT COURSEWORK

Intermediate Software Design	Principles of Operating Systems	Circuits
Program Design and Data Structures	Embedded Systems	Microelectronics
Principles of Software Engineering	Technical Communications	Systems Engineering

PROJECTS

Software Development

Dragracer: Team Lead / Swift Developer: Summer 2019 – Present
Designed and led the development of an iOS car app *Dragracer* using Swift.
Led and managed a team of two; utilized SQLite for database storage; utilized Google’s Protobuf library for data encoding; utilized the GPS API to track location, speed, and acceleration data.
Flip: Team Lead / Dart Developer: Spring 2021
Designed and led the development of music library app *Flip* using the Flutter framework.
Led and managed a team of four; interfaced with the client, VU Band Director Dr. Doug Morin; used Flutter for cross-platform development; utilized SQLite for database storage; utilized Sockets for implementing server-client communication.

Engineering

Vanderbilt Aerospace Design Laboratory (VADL): Payload Engineer: 2021 – Present
Selected as Payload Engineer for VADL; competing in NASA’s 2022 Student Launch; designing and fabricating hardware capable of autonomously locating a rocket’s landing site without the aid of location services (GPS); designing and implementing image-processing and recognition software.
Distributed Autonomous Path Learning (DAPL): Team Lead / C++ Developer: Fall 2020
Designed and led the development of an AI-driven car that learns how to autonomously navigate.
Led and managed a team of three; constructed a Raspberry Pi car; utilized sonar, visual sensors, and motors to navigate the environment; developed an AI that uses sensor data to learn; used OpenCV for optical flow image processing; developed a server application to distribute the data to other cars.

WORK EXPERIENCE

Vanderbilt University

Digital Systems Teaching Assistant/Grader: 2020 – 2021
Worked as a paid TA/Grader at Vanderbilt University for EECE 2123 Digital Systems, a class on Boolean algebra, computer architecture, digital logic circuit design, and assembly programming.
Graded homework, exams, and helped tutor and assist struggling students in the class.

ACTIVITIES

Vanderbilt Free and Open-Source Society (vFOSS)

Vice President: 2021 – 2022 / ***Member:*** 2019 – 2021
ezEngine Game Engine: 2020 – 2021
Learned how game engines function using ezEngine to develop games; inspired our team to start design on a new, more optimized entity component system for a future game engine.
Enigma Game Engine: 2019 – 2020
Continued development on the open-source Enigma game engine; worked on fixing a bug where the pixel setting the transparent color for the texture was not detected.

Marching Band

Section Leader: 2017 – 2018, 2021 – 2022 / ***Member:*** 2014 – Present
Participated in marching band for entirety of high school and college; gained desirable skills through leadership positions as Section Leader, enhanced communication skills by managing members.

SKILLS

Proficient in C/C++/Swift/Dart	Familiar with Python/MATLAB/Java
Proficient in professional software development	Proficient in leadership positions
Proficient in development utilities (git, VS Code, etc.)	Proficient with team-client communication