BAO NGUYEN

baonguyen2604 | 615-918-9201 | quocbaonguyencong@gmail.com

EDUCATION

Vanderbilt University **Nashville, TN**
Vanderbilt School of Engineering – Bachelor of Engineering May 2020
Major: Computer Engineering GPA: 3.95/4.00
Relevant Coursework

Algorithms	Data Structures	Object-Oriented Programming
Operating Systems I	Computer Organization	Database Management Systems

TECHNICAL SKILLS

- **Languages:** C/C++, Java, Swift, Python, JavaScript, HTML/CSS
- **Technologies:** Git, React Native, Django, Node.js, MongoDB, Arduino

PROJECTS

Dike **October 2017 - Present**
Group Project

- Develop a rideshare mobile application allowing people to share rides with each other.
- Create user interface with React Native and build back-end database with Django framework.
- Setup Continuous Integration (CI) services to unit test program on different platforms and machines.
- Deploy app onto remote server with Heroku to store database on users and trips on the cloud.

VUCourse **September 2017**
Hackathon Participant

- Built a mobile application that suggests courses for Vanderbilt engineering students to take based on the courses taken. (Developed using Swift and Node.js with MongoDB).
- Formulated an algorithm applying topological sort to determine courses based on prerequisites.
- Implemented RESTful API and HTTP responses to communicate between front-end and back-end.

WORK EXPERIENCE

Vanderbilt University EECS **Nashville, TN**
Teaching Assistant August 2017 – Present

- Hold 3 weekly office hours to assist 50 students enrolled in CS 3251 – Intermediate Software Design, an in-depth course on C++ and design patterns.
- Grade and give feedback on programming assignments, including debugging, optimizations, implementations of different data structures and design patterns.
- Guide students on algorithmic thinking and implementation methods for basic data structures from high level design to edge case testing and safety checks.

Vanderbilt Robotics Club **Nashville, TN**
Group Leader: Programming Team, Electronics Team August 2016 – Present

- Designed a program utilizing PID Controller to command robot to do specific tasks: throwing a star-shaped object, pushing a cube to a desired position, and hanging itself on a horizontal rod.
- Developed an Arduino program to extract and use raw data from an Inertial Measurement Unit (IMU) to measure the robot's acceleration and rotations.
- Applied machine learning to train and improve robot's throwing accuracy.

VUSE Summer Research Program **Nashville, TN**
Research Assistant May 2017 – August 2017
Project: Electrical Switching of VO_2 for Silicon Waveguide Modulator

- Used Python scripts to design materials layout for fabrication process.
- Designed experimental setup to measure electrical properties of Vanadium Oxide (VO_2) with LabVIEW.
- Performed COMSOL simulations to predict and verify measurements.