

# Jacob Park

SOFTWARE ENGINEER · COMPUTER SCIENCE MAJOR

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## Education

### Vanderbilt University

B.S. IN COMPUTER SCIENCE

Nashville, TN

August. 2016 - Exp. May. 2020

## Skills

**Languages** C++, JavaScript, Python, Java, HTML, CSS

**Technologies** React.js, Node.js, Vue.js, REST API, Firebase, Git, Flask, NodeJS, Amazon Web Services (AWS), iOS Development, Web Scraping

## Work Experience

### Vanderbilt Institute of Software Integrated Systems

Nashville, TN

RESEARCH INTERN

May. 2019 - July. 2019

- Implemented machine learning algorithms (HAC, HDBSCAN, PCA, etc.) with Python to spatiotemporally analyze the traffic incident factors and to further predict incidents in Nashville.
- Developed a 3D data visualization model of aggregated data using kepler.gl to visualize traffic accidents in Nashville.

### Vanderbilt Department of Civil and Environmental Engineering

Nashville, TN

UNDERGRADUATE RESEARCH ASSISTANT

Mar. 2019 - Present

- Designed and implemented a web application to provide a platform for stakeholders to evaluate a variety of sustainable and economically feasible options for managing municipal solid waste using Vue.js and Firebase.
- Implemented a matrix for simplified LCA of waste management with AHP to analyze stakeholders' pairwise comparisons.
- Developed Python scripts to scrape data for real-time power outage data and affected customers.

## Projects

### Seonbae

Full Stack Development

MERN STACK

July. 2019 - Present

- Created a web application to provide a platform for alumni networking to help students in respective universities land jobs.
- Developed REST API for user authorization with JWT authentication, as well as user functionalities to view and manage postings.
- Implemented front-end with React.js, and back-end with Node.js, Express.js, and MongoDB.

### Decision Together

Web Development

JAVASCRIPT

June. 2019

- Developed a web application to evaluate the preferences of criteria and alternatives for MSW management systems to implement in Middle Tennessee.
- Analyzes stakeholders' preferences and consistencies by implementing comparison matrices and calculating principal eigenvectors.
- Implemented front-end with Vue.js, and back-end with Firebase.

### FEH-api

REST API

PYTHON

April. 2019

- Designed a REST API for developers of Fire Emblem Heroes community to feasibly integrate into their applications.
- Developed Python scripts using Scrapy-Splash to scrape for Fire Emblem Heroes units' information
- Implemented key API functionalities with user authorization by incorporating Flask-RESTful and SQLite.

### gaja

iOS Development

SWIFT

Feb. 2019

- Developed an iOS app to store categories of lists of favorite locations in a database, and conveniently locate those categorized places on a map by integrating API services.
- Incorporated Google Maps API, Google Places API, and Realm database to search and map desired locations.

## Campus Involvement

### Vanderbilt League of Legends

Vanderbilt University

PRESIDENT, FORMER TREASURER

March. 2018 - PRESENT

- Directed the organization to foster, develop, and educate the gaming community of 200+ members on campus.
- Coordinated tournaments against other universities across the nation, as well as local tournaments and events.
- Orchestrated advertisement campaigns increasing tournament and event turnout by 50%.