MARK TAKATSUKA

COMPUTER SCIENCE

takatsuka.mark@gmail.com
4254072569
/in/mark-takatsuka

Skills

RELEVANT COURSES

Analysis of Algorithms
Graph Theory
Number Theory
Cryptography
Project Based Software Engineering
Parallel and Distributed Systems

PROGRAMMING LANGUAGES

Java
Python
C / C++ / C#
Vue JS
Go

SOFTWARE

Kubernetes
Spring Boot
AWS
PostgreSQL
DynamoDB
Tensorflow

Awards

RIT Deans List
Fall 2018 - Spring 2020

1st Runner Up at Hack Upstate
2019

1st in Robotics and Intelligent Machines
Washington State Science and Engineering Fair, 2018

Education

Rochester Institute of Technology — Aug. 2018 to Current
Bachelors Computer Science 2022
Minor in Mathematics
GPA: 3.86

Employment

Blocwatch - SecureCloudDB — Rochester, NY
Software Engineering Intern — May 2020 to Current

- Worked in an agile environment designing, developing, and testing backend services to monitor application activity.
- Researched database performance scaling, and tested alternative methods for structuring PostgreSQL and DynamoDB databases in AWS.
- Implemented and enhanced API components running in Kubernetes.

Projects

Expression and Function Interpreter — Apr. 2020 to Current

- Developed a web application in Java and Vue JS to parse and evaluate mathematic expressions.
- Implemented and optimized algorithms to compute common and cryptographic function results, using number theory principles.

Distributed Computing Platform — July 2019 to Feb. 2020

- Designed and developed a robust clustered network in Python and C#, for solving computationally intensive problem sets.
- Utilizes load balancing, parallelization, and encrypted communication to achieve high efficiency over large geographic areas.

HikeLine — Oct. 2018 to Nov. 2018

- Android app designed for hikers in remote parks to send emergency alerts to others in the surrounding area.
- Developed app integration with the Google Maps API and Firebase for live location monitoring and tracking.

Swarming Algorithm Visualization — Oct. 2019 to Dec. 2019

- Led back end development, using a threaded Python server and a MySQL database to manipulate simulated drones.
- Created and simulated efficient mathematical swarming algorithms to demonstrate emergent behavior.

Activities

RIT AI Club · Member — Jan. 2020 to Current

- Conversed and learned about Artificial Intelligence, discussing theory, new developments, and implementations.
- Participated in member presentations, discussing their current research.