Run Zhu

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EDUCATION

UNIVERSITY OF MASSACHUSETTS AMHERST, College of Information and Computer Science

Master of Science — Amherst, MA

Major: Computer Science — Expected Graduation: May 2020

PROGRAMMING LANGUAGE & PLATFORM SKILLS

Proficient: Java, Python, JavaScript, Angular 2+, HTML, CSS, SQL, Git

Competent: C, PHP, NodeJS, Flask, MATLAB, R, Tableau, SPSS, Microsoft Azure, Linux

EXPERIENCE

VITRIS — Philadelphia, PA

Full Stack Developer (Intern) — April 2018 – September 2018

- Implemented Chart JS with Angular 5 to visualize customer behavior and business operations
- Coordinated with business analysts to design data structures for front-end visualization and information storage
- Improved backend (node.js) efficiency by optimizing MySQL queries and utilizing Promises
- Improved error handling middleware to log important issues and create more transparency for debugging
- Conducted database modeling, design and optimization

TEMPLE UNIVERSITY — Philadelphia, PA

Information Technology Assistant (Undergrad Student Teaching Assistant) — Jan 2017 – May 2018

- Enhanced students' programming skills in PHP, JavaScript, HTML, and CSS via weekly coaching sessions
- Taught basic UI design principle, web-application architecture concept, debugging skills in coaching sessions

PROJECT

ANAV – Elevation Based Navigation Map App — Oct 2018 – Dec 2018

A Google Map like app for cyclists that gives routes based on elevation changes, distance, and road type

- Optimized A Star Algorithm using a better graph data structure for faster run time and lower memory usage
- Implemented and optimized a heuristic function to decrease the path finding algorithm run time
- Implemented a cost function allowing the app to give routes based on calculated elevation change of the edges
- Implemented unit test cases for backend components

Turn-Pic-to-Sketch — Jan 2019 - Present

A compacted machine learning app that turns normal image into pencil sketch like image

- Used a Clustering algorithm to reorder the image pixels' RGB value to make it looks like a pencil drawn sketch
- Implemented the algorithm to deconstruct and reconstruct the image using NumPy and SciPy
- Deployed the Flask as the mainframe of the app

COURSE

Taken: Advanced Algorithm, Machine Learning, Software Engineering,
Data Structure, Computer System & Low-Level Programming, Data Centric App Development

Taking: Distributed Operating System, Algorithm for Data Science, Secured Distributed System

AWARDS

1st Place - AIS Student Chapter Data Analytics Competition in University of Texas at Dallas — April 2018

1st Place - Temple University Data Analytics Challenge — Nov 2017

1st Place - AIS Student Chapter Data Analytics Competition in Brigham Young University — April 2017

Dean's List - Temple University — Dec 2015 – May 2018