

# Run Zhu

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## EDUCATION

### **UNIVERSITY OF MASSACHUSETTS AMHERST, College of Information and Computer Science**

Amherst, MA

Computer Science, Master of Science, GPA: 3.7

Expected Graduation: May 2020

### **TEMPLE UNIVERSITY, FOX SCHOOL OF BUSINESS**

Philadelphia, PA

Management Information System & Computer Science, BBA, GPA: 3.9

Graduation: May 2018

## PROGRAMMING LANGUAGE & SKILLS

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

Competent: NodeJS, C, PHP, CSS, Solidity (Ethereum), NLP, Neural Network, ML, PyTorch, Linux,

## EXPERIENCE

### **UNIVERSITY OF MASSACHUSETTS AMHERST**

Amherst, MA

#### **Grader (CS 520: Theory and Practice of Software Engineering)**

September 2019 – Current

- Evaluate the code submitted by over 50 students based on its correctness, readability, and reliability
- Provide feedback on homework evaluation and resolve regrade request

### **VITRIS**

Philadelphia, PA

#### **Full Stack Developer (Intern)**

April 2018 – September 2018

- Implemented Chart JS with Angular 5 to visualize customer behavior and business operations
- Design and implement the data pipeline for the data visualization and display for the customer dashboard
- Improved backend (node.js) efficiency 15% by optimizing SQL queries and utilizing Promises
- Implemented an error handling middleware for critical issues logging and tools for more transparent debugging
- Conducted database modeling, design and optimization collaborating with business analyst

### **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

### **Pygmy – A Multi-Tier Online Shopping Book Store**

March - April 2019

- Used Java Spark microservices framework to build scalable and fault tolerant distributed backend servers that allows web client search and buy books using RESTful HTTP request
- Designed the multi-tier architecture to distribute different client requests to different server components
- Implemented content cache and request load balancing mechanism on replicated servers for fast response time
- Implemented inter-server fault detection and crash recovery mechanism for robust fault tolerance
- Implemented the read 1 write all consensus mechanism to keep data consistent on all replicated server and DB
- Used Docker and Linux container to package each app component for easy deploying

### **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 which decreased the path finding algorithm run time 60%
- Implemented a cost function allowing the app to give routes based on calculated elevation change of the edges

## AWARDS

1<sup>st</sup> Place - AIS Student Chapter Data Analytics Competition in University of Texas at Dallas

April 2018

1<sup>st</sup> Place - Temple University Data Analytics Challenge

Nov 2017

1<sup>st</sup> Place - AIS Student Chapter Data Analytics Competition in Brigham Young University

April 2017