

Tianqi (Matthew) Zhang

411 Washtenaw Ave – 48104 Ann Arbor, MI – USA

☎ (734) 882-9922 • ✉ zhangtia@umich.edu • 🌐 zhangtia.github.io
🐙 github.com/zhangtia • in linkedin.com/in/tqzmatt

Education

University of Michigan, Ann Arbor

September 2017 – April 2021

Bachelors's Degree, College of Engineering

Major in Computer Science, minor in Material Science and Engineering

Related Coursework:

- Intro to Operating Systems
- Database Management Systems
- Data Structures and Algorithms
- Intro to Computer Organization
- Discrete Mathematics
- Differential Equations

Experience

Star Charge, Wanbang New Energy Investment Group

May 2019 – August 2019

Data Engineer Intern

- Retrieved and analyzed data using SQL querying to identify stations of our competition that had the greatest daily average users, so we could increase our own user count and growth.
- Programmed with Java and SQL to query data from MySQL database and MongoDB.
- Researched and experimented with CovenantSQL database for possible enterprise usage.
- Achieved a peak daily user of 60,000 and total revenue exceeding RMB1,000,000 by the end of August.

University of Michigan Intelligent Ground Vehicles

August 2018 - April 2019

Controls Team Programmer

- Wrote path-finding algorithm with input from robot LiDAR to compute path to travel along a white line.
- Simulated and tested the algorithm using ROS Software in Linux environment.

SOCR Big Data and Predictive Analytics Team

November 2019 - Present

Incoming Research Student

- Will join research team of Professor Ivo Dinov regarding big data analytics.
- Team will develop online toolbox to enhance the visual presentation and interpretation of Big Data.

Projects

Capture the Breaker Tournament Generator - umiche1.herokuapp.com

November 2019

- Webapp to automate breakdance competitions organised by U-M Element 1 club.
- Utilized Spring Boot to build a microservice and React front-end, deployed to Heroku.
- App handles sign up of competitors and displays the results of each battle until the final.

Alexa BlueBus Skill - U-M Makeathon 2019

February 2019

- Designed and implemented an Alexa skill to check and plan commute of buses.
- Computed walking distance of user to bus stop using Google Maps' API and AWS Lambda.
- Team received first place in the two-day Makeathon competition.

Personal Webpage - zhangtia.github.io

September 2019

- Wrote and deployed a personal webpage to apply front-end knowledge.
- Created with React bootstrap and Javascript and deployed with Github pages.

School Projects

September 2017 - Present

- **Disk Scheduler** : Implemented a server with Linux infrastructure to handle and execute disk requests. Manages direntries and inodes synchronously as requests are handled.
- **Page Handler** : Built a virtual machine to create, read, write and delete data pages. Simulates an operating system running multiple processes.
- **Grace Hash Join** : Implemented a grace hash join function to partition and store data pairs in a database system.

Skills

- **Languages:** C++, C, Java, SQL, Python, Javascript, MATLAB, R, \LaTeX
- **Tools:** Git, Xcode, VSCode, IntelliJ IDEA, Navicat, Sublime Text
- **Database Management:** MySQL, MongoDB
- **Cloud-based Tech:** AWS Lambda, Docker, Heroku