Ze Yuan (Gavin) Zhang

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EDUCATION

Rice University (2019-2022) Houston, TX

Bachelor of Science in Computer Science

Relevant Coursework: Data Structures and Algorithms, Machine Learning, Computer Systems, Distributed Systems, Probabilistic Algorithms, Parallel Programming, Databases, Operations Research

GPA: 3.9 (Overall and Major), Cum Laude, President's Honor Roll

SKILLS

Programming Languages: Python, Java, C, HTML, CSS, JS, TS, Solidity, MATLAB, SQL, MQL, Rust, Assembly

Tools: Keras, TensorFlow, OpenCV, Mediapipe, Pandas, Firebase, Flask, Express, React, Docker, Ethers, Hardhat

EXPERIENCE

CTO, ZipZap LLC San Diego, CA | Jan 2023 - Present

- Designing patent pending Proxy Wallet to enable universally compatible collateral-free NFT renting
- Implementing microservices and multi-chain dApp using Docker, Express, React, Firebase
- Developing modular, self-connecting, upgradable smart contracts using Solidity, Hardhat, Ethers
- Creating Ethereum JSON-RPC compatible browser extension to connect any dApp to Proxy Wallets

Software Engineer Intern, MealMe San Francisco, CA | May 2022 - July 2022

- Protected over $10,000 USD of monthly profits by updating API parsing for over 10 delivery services
- Automated SkipTheDishes accounts creation by analyzing graphQL endpoints and using AnyCaptcha
- Enabled and live-tested anonymous SMS and calls using SignalWire to connect users and drivers

Student Data Scientist, Shell Hydraulics Houston, TX | Jan 2022 - May 2022

- Analyzed Stick-Slip in pistons by coordinating team of students, working with Shell Hydraulics mentors
- Extracted features from over 300 csv files using Detrended Fluctuation Analysis and Wavelet Transform
- Classified files for varying degrees, intervals of Stick-Slip using Convolutional Neural Network

Machine Learning Intern, Infobird Co. Beijing, CN | May 2021 - Jul 2021

- Designed OCR server reading serial numbers using OpenCV, Paddle, Flask to automate customer service quality assurance
- Improved accuracy by 45% on images with diagonal text using Canny and Hough transformations
- Improved overall accuracy from 75% to 90% by tuning MobileNetV3 using 2000+ images from clients

Research Assistant for Dr. Peter Varman, Rice University Houston, TX | Feb 2020 - Aug 2020

- Researched Fair-EDF, a scheduler fulfilling the same percentage of requests from different clients
- Predicted SSD response times with a decision tree with 4 nodes per branch in MATLAB
- Accomplished fast training (0.14s on a training set of 5000+ requests, 52000 observations/second) with a 15% error on average on a YACSIM simulated SSD

PROJECTS

Simple S3 Aug 2022 - Dec 2022

- Designed distributed storage system similar to Amazon S3 using master-worker nodes architecture
- Implemented secure and horizontally scalable system using AWS, Flask, Swagger
- Created responsive dashboard using React, ChakraUI to monitor system performance, health

ChatApp Dec 2021

- Implemented messaging app using model-view-controller and publisher-subscriber systems, Java RMI
- Designed, presented API with type-narrowing voted for class-wide (100+ students) usage
- Incorporated visitor and factory design patterns to allow processing of unknown message types

Bluetooth Table Tennis Serving Robot June 2020 - Jul 2020

- Produced table tennis serving robot with configurable hitting patterns, spins, speeds
- Created mobile bluetooth application, Arduino program to control robot
- Designed circuit using microcontroller, DC motors, servo motors, H-Bridges, breadboards