Gavin Zhang

linkedin.com/in/zeyuanzhang/ | zeyuanzhang.com | zz66@rice.edu | 346 677 4803

EDUCATION

Rice University (2019-2022), Bachelor of Science in Computer Science   Houston, TX
Relevant Coursework: Data Structures and Algorithms, Machine Learning, Computer Systems, Distributed Systems, Probabilistic Algorithms, Parallel Programming, Databases, Operations Research, Cryptography
GPA: 3.9 (Overall and Major), Cum Laude, President's Honor Roll

SKILLS

Programming Languages: Python, Java, HTML, CSS, JavaScript, C++, Solidity, MATLAB, SQL, Assembly
Tools: Flask, Express, React, Firebase, Tailwind CSS, MongoDB, Docker, AWS, Keras, OpenCV, Ethers, Hardhat, JUCE

EXPERIENCE

Co-Founder & Software Engineer, ZipZap LLC (zipzap.net)   Houston, TX | Jan 2023 - Jan 2024
- Invented collateral-free NFT rental system with React frontend, Node backend, Blockchain infrastructure
- Safeguarded $50,000+ USD assets by designing Crypto wallet to detect malicious transactions
- Created 6 microservices to operate wallets and rental returns with NodeJS, Express, Firebase, Docker
- Implemented 20+ auto-connecting Transparent Proxy smart contracts using Solidity, Hardhat, Ethers

Software Engineer Intern, MealMe Inc. (mealme.ai)   San Francisco, CA | May 2022 - Jul 2022
- Recovered $10,000+ USD of monthly profits by updating backend (confidential)
- Connected 1000+ users/day to deliverers by revamping anonymous SMS and calls using SignalWire
- Increased loading speed by 50%+ in some cases by optimizing restaurant listings and images shown

Software Engineer Intern, Infobird Co. (infobird.com)   Beijing, CN | May 2021 - Jul 2021
- Produced OCR server reading serial numbers using OpenCV, Paddle, Flask to automate quality assurance
- Improved accuracy by 45% on images with diagonal text using Canny and Hough transformations
- Increased overall accuracy from 75% to 90% by tuning PP-OCRv2 CNN using 2000+ images from clients

Portfolio Review Analyst, Rice Undergraduate Investment Fund   Houston, TX | Sep 2019 - Dec 2020
- Performed 4 pitches and industrial reviews with quantitative (DCF) and qualitative analysis
- Facilitated 44% return on the stock CLB by pitching to hold rather than sell

Research Assistant, Dr. P. Varman (pjv@rice.edu), Rice U.   Houston, TX | Feb 2020 - Aug 2020
- Predicted SSD response times using regression tree with minimum split threshold of 20 in MATLAB
- Accomplished mean 15% error on YACSIM simulated SSDs by training with 5000+ requests

PROJECTS

Equalizer Plugin   Dec 2023 - Jan 2024
- Created audio equalizer with lowcut, highcut, peak filters compatible with all major platforms via C++
- Rendered spectrum analyzer and GUI using Fast Fourier Transform of size 1024 and JUCE
- Prototyped noise reduction with Spectral Subtraction, Wiener Filtering, Convolutional Encoder-Decoder

Simple S3   Aug 2022 - Dec 2022
- Devised distributed storage system following Amazon S3 API using master-worker nodes architecture
- Enabled horizontal scaling with varying worker nodes and file replication using AWS EC2, Flask

Shell Hydraulics Stick-Slip Analysis   Jan 2022 - May 2022
- Analyzed Stick-Slip for Capstone by coordinating team of 5 students to work with Shell mentors
- Experimented with 300+ files using Detrended Fluctuation Analysis, Wavelet Transform
- Conceived metric for varying degrees, intervals of Stick-Slip with Fast Fourier Transform, Hampel Identifier

ChatApp   Dec 2021
- Designed messaging API elected for 100+ (class-wide) students to use by featuring built-in type-narrowing
- Developed desktop app using model-view-controller and publisher-subscriber systems, Java RMI
- Incorporated visitor and factory patterns to allow processing of unknown message types

ADDITIONAL

Patents: Limited Use NFT System (Serial 18/144,432) (Pending)
Languages: English (Native), Chinese (Native), French (Intermediate)