

JAY (XIAOJIE) ZHOU

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EDUCATION

University of California - Los Angeles
Master's, Computer Science

September 2023 - June 2025

University of California - Irvine
Bachelor's, Computer Science

September 2019 - March 2023
GPA: 3.71

SKILLS

General: Java, Python, C/C++, Bash, R, Product Management, Computer Architecture, Data Structures & Algorithms, Computer Networking
Web Dev: Node.js, REST APIs, AngularJS, Firebase, jQuery, Ionic, HTML/CSS, React.js, React Native, TypeScript, Vue.js, Postman, Java Spring, Flask
Database: RDBMS, Postgres, MySQL, Redis, MongoDB, sqlite
Software Engineering: CI/CD, Agile, Git, Docker
Data Science: NumPy, Pandas, Jupyter, sklearn, OpenCV, matplotlib
Languages: Mandarin, Chinese, English

PROFESSIONAL EXPERIENCE

NAYAD

Software Developer Intern - Marketing Automation

Remote
June 2024 - September 2024

- Formulated a crawler to identify potential nano influencers for brand collaborations, streamlining discovery process, generating hundreds of potential candidates in minutes
- Designed and implemented algorithms to extract and analyze follower counts from Instagram and TikTok based on user handles, enabling data-driven decision-making and improved productivity by 16%
- Generated personalized email outreach campaigns using batch processing, synthesizing engagement data for dynamic follow-ups with tracking tools and reducing 85% of repetitive work
- Created an automated workflow to organize end-to-end influencer engagement, from data extraction and outreach to real-time engagement analysis and follow-up actions, getting more responses than previous 2 months in 2 weeks

Intco Medical Industries Inc.

Software Engineer Intern - Workflow Automation

Ontario, CA, USA
June 2020 - September 2020

- Constructed automation scripts to reconcile and process tens of thousands of financial statements and invoices, ensuring error-free payments to vendors and simplifying workflow
- Deployed a digital time card system; it works with payroll and accounting platforms to streamline employee management and payroll processing, improving correctness and productivity by 9%
- Scheduled software updates across organization biweekly, ensuring all workers had latest tools and systems without disrupting operations
- Migrated historical data between databases during transition to new systems used by 3 departments
- Onboarded new employees of 3 teams by setting up user accounts and deploying desktops and office equipment, ensuring a smooth start for team members

PROJECTS & OUTSIDE EXPERIENCE

Context-Free Grammar Converter

Developer

Los Angeles, CA, USA
September 2024 - December 2024

- Developed a Python-based tool to convert regular expressions into context-free grammars (CFGs)
- Implemented unit tests to ensure accurate grammar conversion
- Automated testing and result logging with a custom evaluation script
- Conducted extensive validation to ensure consistent grammar output
- [Link to project](#)

LoRa Device Message Management System

Full Stack Developer

Los Angeles, CA, USA
March 2024 - June 2024

- Collaborated with a team of 4 to design and develop a full-stack system for receiving, storing, and displaying messages from multiple LoRa devices
- Constructed a database using PostgreSQL to store device identifiers and message logs, ensuring efficient and reliable data storage
- Prototyped front-end interface using Vue3 and Flask for device management and data aggregation, allowing sorting, filtering, and real-time data display
- Distributed system using Docker on Raspberry Pi, optimizing storage (under 500MB) and performance (under 30% CPU usage)
- Utilized WinGstack and organized real-time data emitted from 3 registered SparkFun devices
- Brainstormed with team members and mentors when debugging device communication issues and fixing Python to PostgreSQL integration; created one workaround and prompt plan

Overall Evaluation

Full Stack Developer

Shanghai, China
October 2017 - September 2018

- Designed and developed an Android application used by a school in Shanghai to help K-12 teachers evaluate students more conveniently and by simplifying data entry process
- Integrated QR code recognition using an open-source library, enabling fast and 100% accurate identity verification for student data entry
- Implemented a MySQL database to securely store and manage student data, with encryption and access controls to ensure data privacy
- Published a paper (in Chinese) in Digital Communication World journal (September 2018 issue) detailing system implementation as first author

Information Retrieval – CS 121

Search Engine Engineer

Irvine, CA, USA
September 2021 - December 2021

- Built a search engine from scratch; it can process tens of thousands of Web pages under harsh hardware and network constraints and kept query response time under 300ms
- Implemented crawler to download tens of thousands of web pages (as permitted by the department) with politeness and efficiently indexed with tokenizer, stemmer, HashMap, and partial/hierarchical index
- Implemented tf-idf page ranking algorithm when processing queries to give 20 most relevant document links each page
- Balanced system memory usage and efficiency by offloading index multiple times to accommodate large indexes (around 8 GBs) and combining afterward when necessary

E-Commerce Full Stack Website Developer – CS 122B

Full Stack Developer

Irvine, CA, USA
January 2022 - March 2022

- Lead development of a full-stack e-commerce website for film purchasing, focusing on backend functionality with Java Spring while exploring basic front-end design using React
- Designed and managed a secure and efficient database structure containing thousands of movies and identity management, implementing robust hashing and salting techniques for password protection
- Integrated Stripe for payment processing, ensuring full functions and secure transactions with 0% failure rate
- Fabricated and integrated more than 20 RESTful API endpoints for seamless client-server communication, with several backend services handling complex database (MySQL) operations
- Created functional front-end interfaces for both web and mobile, focusing on backend integration using React Native to support different OS platforms