Curtis Chang

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EDUCATION

University of California, Irvine *September 2020 – June 2024*

Bachelor of Science — Computer Science Major (Concentration: Information)

- **Relevant Coursework:** Data Structure Implementation & Analysis, Machine/Data Mining, Information Retrieval, Data Management, Principles in System Design, Design and Analysis of Algorithms, Computer Networks, Optimization, Intro to AI, Applied Cryptography, Quantum Computation and Information, Databases and Web Applications, IoT Software and Systems, Software Test and Quality Assurance
- **Skills**: Python, C++, C, Java, HTML, CSS, JavaScript, SQL, Git, Maven, Apache, Tomcat, AWS, Kubernetes, Docker, Google Cloud Platform, Spring Boot, React, React Native, Expo

EXPERIENCE

Software Developer – Elite Sedation *January 2025 – Present*

- Developed an automated credential reminder system, reducing manual intervention to **almost 0%** by implementing autonomous directory organization and dynamic database synchronization, while also streamlining **100%** monthly on-time provider/PRN emails and HR notifications on credentials submit and onboarding completion
- Leveraged **Google Workspace** computation tools to orchestrate seamless workplace integration, developing highly optimized **Google Scripts** applications for enhanced automation and efficiency

Software Developer – Environmental Development Project *August 2023 – August 2024*

- Developed an application component that generates 3D gravity grid generations (gradiometric modeling) layered on top of watershed boundaries to potentially **identify mercury poisoning** within bodies of water
- Worked with technologies such as **QGIS** and **MATLAB** to implement algorithms such as gravity inversion and mesh generation with SRTM2 topography and GGMplus gravity disturbance datasets
- Leveraged PhD research on gravity gradiometric processing and peer-reviewed journals on 3D inversion with model regularizations to deepen understanding on gravity mesh generation
- Coordinated team reviews with at least 10 team members and discussions with experts in geophysics and seismology through different stages of data generation, data cleaning, and algorithm implementation

Camp Instructor – iD Tech *June 2024 – August 2024*

- Presided over instruction for intermediate level courses for kids aged 10-17 teaching **Python Coding 101** and **Artificial Intelligence and Machine Learning**, reinforcing intermediate concepts using libraries such as **pygame**, **pandas**, and **tensorflow**
- Supervised up to 60 students with the help of around 6 other staff members for multiple hour sessions while always being prepared to administer first aid, provide clarity for questions about class topics, or give assistance to students' needs

PROJECTS

MovieMachine – Full Stack

- Developed **MovieMachine**, a web application that enables users to discover movies and TV shows by searching for titles, genres, and exploring cast information, using a responsive and intuitive UI built with vanilla **HTML**, **CSS**, and **JavaScript**
- Implemented **backend API services in Java and JDBC** with an **Apache Tomcat** web server, facilitating real-time fetching of movie details, ratings, summaries, and cast profiles hosted on an AWS for scalable access
- Leveraged **AWS** clusters by using **kOps** in **Kubernetes** to automatically spawn and allocate resources based off user requests to engineer a high-availability web application supporting personalized watchlists and user reviews for interactive media insights

Wenslo.me – Self Hosted Linux/Full Stack

- Designed from the ground up a high-availability website self-hosted on managed hardware with **Proxmox** to automate and manage nodes in a cluster that integrate real-time production pushes removing single points of failure, ensuring 99.99% uptime
- Implemented **Spring Boot** and **MySQL** backend API services while also leveraging external **GitHub GraphQL API** calls to provide session-based dynamic calls and improving database read/writes with security overhead
- Obfuscated my external IP address with **Cloudflare Tunnel** reverse proxy, isolated the internet-facing web server with **pfSense** network bridging, utilized Cyber-Security toolkits like **Snort**, **Zabbix**, and **UFW** for **IPS**, **log monitoring**, and **firewalls**

AIRES (Artificial Intelligence – Read, Explore, and Share Messaging Platform) – Full Stack

- Developed an AI prompt sharing mobile forum, where users can create and share images made from generative AI and their prompts with a responsive UI utilizing **Expo** (RN framework) and native libraries, leveraging the BaaS **Appwrite.IO** to handle potentially 150GB storage and 300GB bandwidth

Spoken Languages: English, Chinese Mandarin, Proficient Japanese
Interests: Learning Languages (Chinese/Japanese/Spanish), Classical Piano, Chess, Basketball, Fitness