Michael Dang

Los Angeles Metropolitan Area/Orange County

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Technical Skills

Languages <u>Proficient</u> Python(4yrs), JavaScript(3yrs), C++(3yrs) <u>Intermediate</u> SQL(2yrs), bash(2yrs), PHP(1yr)
Frameworks: ReactJS/React Native, Jest, Reanimated, ExpressJS, Tailwind CSS, FastAPI, Keras
Technologies/Cloud Services: AWS EC2/S3/CloudFront/Lambda, Firebase, PostgreSQL, Docker, Jenkins, Figma, git

Projects

Cross-Language Content Generator | *AWS S3, AWS CloudFront, OpenAI API, Firebase, ExpressJS*   **April-May 2024**
- Developed a **full-stack** language learning platform featuring integrated English translations facilitated by the **OpenAI API**, enabling users to enhance their Spanish reading comprehension skills.
- Utilized **AWS S3** for scalable and durable file storage and **AWS CloudFront** to optimize content delivery, reducing load time by 30% through edge caching and global distribution.
- Implemented authentication with **Firebase Auth** for trust, security and scalability, **Google Auth** with Single Sign-On (**SSO**) for consistency across other Google services to increase user conversion rate.
- Created **RESTful API** in **Express.js** for usage monitoring, analytics, and facilitate future monetization opportunities.
- Designed a **React Native** UI/UX that balances accessibility and content density for improved information processing.

Word-Guessr Web Game | *AWS EC2, Jenkins, Redis, FastAPI, Docker, React, Tailwind CSS*   **October-December 2023**
- Developed a game similar to NYT's Wordle app using **React/Tailwind CSS** for front-end, **FastAPI/SQLite** for back-end, enhanced with a leaderboard feature to foster competition and increase user engagement.
- Implemented a **Jenkins CI/CD** pipeline to automate game builds and deployments in **Docker** containers on an **AWS EC2** server running **Linux** with **NGINX**, enhancing software delivery efficiency and boosting developer productivity.
- Utilized **Redis** for caching hot data, **SQLite** for cool data to reduce database congestion.
- Used **Cron** execute data aggregation updates at regular intervals to reduce database congestion from frequent updates.

DiscussHub | *PostgreSQL, ExpressJS, Jest, JavaScript, React Native, Reanimated, Firebase*   **June 2024**
- Created a social media platform enabling user-generated content through posts, comments, replies, likes and dislikes.
- Utilized **PostgreSQL** for managing user, post, and comment data storage, updates, and aggregation.
- Used **React Native** and **Reanimated** library to create cross-platform features like infinite scroll, custom swipeable menu, collapsible and recursively-nested comments to enhance user experience.
- Implemented **unit testing** for API endpoints using **Jest** framework including mocking PostgreSQL server interactions to simulate various data scenarios and edge cases to ensure robustness and reliability through comprehensive test coverage.
- Adhered to **SOLID principles** to create flexible and reusable components while minimizing complexity and dependency.

Dictionary/FlashCard Application | *Python, Pandas, React Native, Wikimedia API, SQLite*   **March 2024**
- Developed a **React Native** dictionary application with FlashCard functionality to help users improve vocabulary.
- Used the **Pandas** library for **ETL** (Extract, Transform, Load) operations to restructure raw data for application use.

Education

California State University, Fullerton   **Jan. 2021 – Aug. 2024**
Master of Science in Computer Science   *Fullerton, CA*

University of California, Los Angeles   **Aug. 2007 – Dec. 2013**
Bachelor of Science in Chemical Engineering   *Los Angeles, CA*

Relevant Coursework

- Data Structures
- Advanced Algorithms
- Artificial Neural Net
- AI/ML
- Software Engineering
- Database Management
- Back-end Engineering
- Software Maintenance

Experience

Freelance/Contractor   **April 2016 – June 2016**
Web Developer   *Garden Grove, CA*
- Developed a responsive home page for a travel company using HTML/CSS to increase traffic/customer conversion rate.
- Collaborated with client to deliver cohesive website designs that met branding guidelines.

Extracurricular

Association for Computing Machinery (ACM) at CSUF | *Member*
- Participated in weekly tutorials covering data structures, algorithms, and current technology stacks.

Others: Intra mural volleyball, soccer, hiking, photography