MIAOQIU SUN

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Education

University of California, San Diego   **Sep 2022 – Jun 2023 (Expected)**
Master of Science in Computer Science   *San Diego, CA*

University of California, San Diego   **Sep 2018 – Jun 2022**
Bachelor of Science in Computer Science - cGPA: 3.55/4.00 | Major GPA: 3.84/4.00   *San Diego, CA*
- Relevant Courses: Data Structures, Algorithms Analysis, Computer Architecture, Database Principles, Software Engineering, Object Oriented Programming/Object Oriented Design, Operating Systems, Artificial Intelligence

Work Experience

Hellobike   **Jun 2021 – Sep 2021**
Software Engineer Intern (Back-end)   *Shanghai, China*
- Programmed a service to increase tracking speed by 40% by writing select passenger information into a self-organized search platform during real-time order monitoring through Java, Elasticsearch, and Kafka.
- Solved multiple data problems including data synchronization delay, data access optimization, and historical data refreshing by embedding HLog and paginating common configurations, increasing 20% of efficiency for data processing.
- Reduced labor from 7 to 1 person/week by creating a Python script to automate the entire process of loading un-refreshed stale user data, checking the mismatches from database, and updating new result conflicts to CSV file.
- Developed 15+ new features and bug fixes for the HelloTravel iOS app using Spring Boot and Maven, and executed projects with Agile Methodologies.

sMedio, Inc   **Aug 2020 – Oct 2020**
Software Engineer Intern   *Shanghai, China*
- Provided functional upgrades and increased loading speed by packaging the original DTCP Move app, which moves recorded TV programs to NAS for mobile content playback, into a framework for embedding in a new project.
- Designed, implemented, deployed, and supported 10+ new functions and front-end features to optimize UI for iOS app using Objective-C, including creating a floating button to toggle interfaces directly and rebuilding the initial interface.
- Improved rendering speed of current framework from 8 to 3 seconds, passing unit tests with 94% coverage.
- Fixed 8+ bugs after embedding current framework, including resolving the inability to load storyboard and play audio.
- Worked in a cross-functional collaborative environment, assigning tasks and managing updates via Git and Jira.

Projects

Job Tracking Web App | *MongoDB, Express, React, NodeJS, Full-Stack Development*   **Apr 2022 – Jul 2022**
- Created an interactive job search web application using React allowing users to register, login, add & view jobs, view personal profiles and visualize stats to easily track their job search progress.
- Designed and implemented RESTful APIs, mapping HTTP methods with CRUD actions for efficient, reusable routes.
- Developed Mongoose schemas for efficient validation and constraints for users and jobs separately, stored in MongoDB.
- Implemented JWT for user authentication and authorization, used Express.js for the back-end framework, and deployed to Heroku for stability and high system robustness.

Development of Operating System | *Java, Nachos, Unix*   **Apr 2021 – Jun 2021**
- Implemented core parts of Nachos OS (an instructional operating system) using Java on Unix, including threading and multi-programming functionality.
- Managed address space through system calls and loaded it in virtual memory for user-level invocation of Nachos routines.

Potato Timer Web App | *JavaScript, HTML, CSS, GitHub Actions*   **Jan 2021 – Mar 2021**
- Collaborated with a team of 8 to design and build a more playful, advanced Pomodoro website using HTML/CSS.
- Developed both front-end design and the back-end application using JavaScript for the Pomodoro principle, creating 3 themes (dark, light, "potato" mode) with scalable implementation and supporting 4 different languages.
- Built CI/CD pipeline with GitHub Actions and achieved 99.52% coverage through unit testing.
- Won 2nd place and the "Most Creative" Award on the final report and product among 300+ other students.

Technical Skills

Programming Languages: Python, Java, C/C++, HTML/CSS, JavaScript, SQL, Objective-C
Developer Tools: VS Code, Eclipse, Atom, XCode, Jupyter Notebook, Jira
Technologies/Frameworks: Vim, AWS, GitHub, SpringBoot, Maven, MongoDB, Node.js, React, Express, REST API