

Jonasen (Jon) Chang

Software Developer/Engineer

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EDUCATION

University of California San Diego

Bachelor's in Computer Science

Core Courses: Algorithms, Data Structures, Software Engineering, Web Development

Cumulative GPA: 3.8

San Diego, CA

Sept 2018 - June 2022

SKILLS

Languages	Python, C++, Java, JavaScript, PHP, C, SQL, Golang, HTML/CSS, SystemVerilog
Tools / Tech / Frameworks	Docker, Node.js, React, REST/CRUD, AWS, Unix, x86/ARM, VIM, Github, Ubuntu, GDB
Practices	Object-Oriented Programming, Unit Testing, E2E Testing, Agile Methodology, Version Control, Code Reviewing, CI/CD Pipelines, Refactoring

TECHNICAL PROJECTS

UPick Web/Mobile Application

Fall 2020

- Designed and developed an application in **JavaScript** using React Native that dynamically generates a restaurant suggestion based on the user(s) dietary preferences.
- Collaborated in an **Agile environment** with 10 peers of different fields and skill-sets to brainstorm app functionality, and to cooperate in order to fulfill deadline of 10 weeks.
- Integrated the project's various components and functionality into one coherent application using **React Native**.
- Handled **debugging** and **unit-tested** the prototype of the application.
- Simulated online group functionality through specified room codes using **Firebase cloud database**.

KNEAD IT Web Application

Spring 2022

- Refactored** an existing application with user logins, state management, and remote database interactions to perform additional functions such as marking favorite recipes and adding personal comments.
- Utilized **Agile practices** to collaborate and efficiently refactor an existing application to deploy an improved application given a heavy time constraint.
- Designed algorithms and interfaces for read/write operations on the database, and provided for user navigation between pages via query strings using **JavaScript**.
- Created the client-facing UI for the application in a clean, coherent manner using **React**.
- Utilized **code review**, **documentation reading**, and **CI/CD pipelines** to onboard new members to the project.

Custom Dedicated ISA Design Project

Winter 2021

- Designed a dedicated Instruction Set Architecture in **SystemVerilog** using **Questa/ModelSim** to calculate Hamming Code bits, perform bit error correction/detection, and count occurrences of bit patterns in memory.
- Collaborated with peers to conceptualize and invent a clever method of accomplishing the above three tasks, given strict limitations.
- Using our customized **Assembly language**, developed three algorithms to accomplish the three above tasks.
- Developed an Assembler for our algorithms, converting assembly code to machine code using **Python**.

SurfStore Cloud Storage Service Project

Fall 2021

- Implemented a **cloud-based** file storage system using **AWS EC2** servers to sync files between multiple local clients and a remote server.
- Established a connection with the remote server from a client in order to compare file versions and send data to and from the client/server using **Golang**.
- Designed an **algorithm** to govern validity of file operations and file version comparison.
- Implemented **logical clocks** to determine file version and prevent race conditions through storing an index of all files with an updated version number.