

Debbie Pao

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Address: San Francisco, CA, 94121, US Citizen

EDUCATION

University of California, Berkeley

Expected Graduation: May 2019

B.S. Bioengineering, Minor in Electrical Engineering and Computer Science

- Relevant Coursework: Operating Systems and Systems Programming, Computer Security, Efficient Algorithms and Intractable Problems, Data Structures and Programming Methodology, Great Ideas in Computer Architecture (Machine Structures), Structure and Interpretation of Computer Programs, Discrete Mathematics and Probability Theory, Designing Information Devices and Systems

SKILLS

Coding Languages: Java, C, Python, Javascript, Swift, Ruby, HTML, CSS, MySQL, Mongoose, C#, Scheme

Technical Skills: Cucumber.io, Mockito, JUnit, Spring, Ruby on Rails, XML, Google Firebase, React, React Native, DynamoDB, MongoDB, Git, Expo, Electron, XCode, Unity Game Engine, Maya, UNIX, LaTeX, Arduino

WORK EXPERIENCE

Amazon – Amazon Web Services (AWS), Software Development Engineer Intern

5/2018-8/2018

- Implemented customer-facing features to improve the developer workflow experience in continuous deployment pipelines for Amazon's Java-based cloud version control system
- Designed algorithms to calculate and determine quality of source code files compared to existing code stored in the system
- Engineered data models for AWS DynamoDB using operating systems and security principles to provide secure and scalable read-and-write operations for customers' data
- Practiced test-driven development via Cucumber.io and Junit functionality tests via Mockito, validating based on security, metrics, functionality, and scalability.

IBM, Software Engineer Contractor

2/2017-12/2017

Built language-intelligent Chatbot application, in contributing to IBM's Smarter Villages project, that allows Indian villagers to gain awareness and have a secure environment to gain answers to questions about emotional and mental health.

- Designed efficient algorithm to match symptoms to lists of diseases to give a suggestion of possible illnesses the patient could have
- Used IBM's Watson Conversation for natural language processing and parsing in our server; will be launched in India.
- Worked in a team of 10 people and worked closely with IBM's Creative Content Director

TableTip Analytics, Full Stack Software Engineer Intern

7/2017-8/2017

TableTip Analytics is a less than 5-employee startup that provides a platform to enhance restaurant waiters training by evaluating their strengths and weaknesses to maximize sales in restaurants.

- Architected an end-to-end mobile application for both iOS and Android that has been launched for use by many restaurant customers using React Native for optimized performance and used AsyncStorage to store persisting data.
- Created RESTful Web Server API and modular backend using Node.js, Express.js, and Google's Firebase to statefully design multi-step interactions for push notifications and wrote MySQL queries to pull live data from MySQL database.
- Worked closely with CTO and one other person and met every two days to give thought-out feedback about functionality and technical implementations; wrote detailed and complete documentation for backend services.

PROJECTS – Find more projects on my personal website: <http://debbiepao.me>

Secure File Storage System

Python

5/2018

Built secure and efficient file storage system that uses security principles to encrypt files to prevent malicious attacks.

- Stored file data as chunks and used Merkle tree data structures to efficiently update parts of files.
- Encrypted and signed all file chunks using security cryptographic principles.
- Implemented file sharing ability for trusted pool of specific users using symmetric encryption.

Pintos Operating System

C

2/2018-5/2018

- Implemented multi-threaded processes and process synchronization with locks, semaphores, and monitors.
- Constructed user programs to allow for user-prompted process control system calls and file operation system calls.
- Built filesystem using buffer cache and indexed inode data structure that uses multi-level pointers.

Time Pal

Javascript: Node.js and Express.js, Mongoose for MongoDB Database

7/2017

Intelligent Slackbot that can schedule reminders and meetings in Google Calendar using natural language processing queries.

- Designed interactive process for statefully managing multi-step chat interactions using Slack's Real-time Messaging API and Google's API.AI that allows for a friendly bot interface to schedule conflicts, cancellations, and confirmations.
- Scheduled batch job using Heroku by designing a cron job and devised unified OAuth flow for Google Calendar.

RESEARCH

OpenArk Augmented Reality (Computer Vision Research) Software Developer/Researcher

2/2017-6/2017

Designed and open-sourced an augmented reality development toolkit that enables human computer interaction in 3D space on any augmented reality platform.

TEACHING

UC Berkeley

CS61A (Functional Programming), CS61B(Data Structures) Tutor/Lab Assistant

8/2016-6/2017