

# Joanne Chang

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## EDUCATION

*Expected Graduation: June 2020*

### Computer Science & Engineering, Bachelor of Science

University of California, Davis

GPA: 3.374

#### Relevant Coursework

- Data Structures
- Algorithm Design
- Programming Languages
- Probability & Statistical Modeling
- Computer Architecture
- Machine Dependent Programming
- Operating Systems (ongoing)
- Embedded Systems (ongoing)

## SKILLS

*Software:* • C, C++, Python, Java • LaTeX • R, MATLAB  
*Hardware:* • Chisel • VirtualBench, Oscilloscopes

## PROJECTS

### Airbnb Price Predictor, *Probability & Statistical Modeling*

*March 2019*

- Devised a linear model in R that predicts Airbnb rental prices in the San Francisco area with three other students
- Performed data analysis using mean absolute percentage error (MAPE) to develop better fitting model
- Reduced initial MAPE of about 60 to 45 after four model changes

### Davis In-Order CPU, *Computer Architecture*

*January to March 2019*

- Implemented a simple in-order CPU design over a series of 4 labs in Chisel code
- Utilized pipelining and branch predictors to speedup performance of CPU for various workloads
- Ran simulations and reported on the benchmark results of single-cycle versus pipelined CPUs with different types of branch predictors

### Java Translator, *Programming Languages*

*November 2018*

- Created a Java program with a scanner, parser, and symbol table that translates a fictional E language into usable Java code dependent on the E language's Backus-Naur form (BNF) grammar

### Journal Analyzer, *HackDavis*

*January 2018*

- Designed a website-based journal analyzer that determines intended emotions of inputted text
- Usage of Google Cloud Natural Language Processing API in conjunction with HTML, CSS, and Javascript
- Inspired by the Save Ourselves Breast Cancer organization with the intention of helping breast cancer patients

### Appointment Calendar Program, *Software & Object-Oriented Programming*

*April to May 2017*

- Programmed a text-based appointment calendar with linked lists and vectors over a set of 5 programs in C++
- Applied concepts such as abstraction and polymorphism to enable inputted appointments to be saved and searched for by date and subject

### Conway's Game of Life, *Intro to Programming / Machine Dependent Programming*

*December 2016 / 2017*

- Developed programs based on Conway's Game of Life in Python and in CUSP assembly language with cell grid generations represented by printed asterisks and dots

## ACTIVITIES

- Member, Davis Computer Science Club (DCSC)
- Member, Society of Women Engineers at UC Davis (SWE)

*September 2016 - Present*

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