

# Jennie Nguyen

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## EDUCATION

**University of California, Santa Cruz**

SEPTEMBER 2017 – MARCH 2021

*Bachelor of Science, Computer Engineering*

- Dean's Honors List Spring 2018 & 2020
- Courses Taken: Computer Networking, Operating Systems, Data Structures, Algorithms & Abstract Data Types, Computer Systems Design, VLSI Digital System Design, Computer Architecture, Electronic Circuits, Technical Writing

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## EXPERIENCE

**Tech4Good Lab, Santa Cruz** — Undergraduate Research Assistant

JANUARY 6, 2020 - PRESENT

- Coded Google Apps Scripts in Javascript to automate the lab's qualitative analysis research process, set permissions, and connect Google documents & spreadsheets
- Worked for 10+ hours/week to develop the UI components of the lab's applications and platforms using HTML & CSS
- Studied social computing, intersections of computational systems & computer interaction

**Bay Area Rapid Transit (BART), Oakland** — Systems Engineering Intern

JUNE 22, 2020 – AUGUST 14, 2020

- Developed firmware & python scripts to implement 3 types of sensors (ultrasonic, thermal, infrared) with Raspberry Pi 3B
- Compiled analysis of requirements, specifications, and Bill of Materials for procurement of equipment worth \$500
- Practiced Scrum Agile Methodology with Sprint backlogs, daily Scrum meetings, and Sprint retrospectives
- Researched new sensors to improve current fare gates, prevent fare evasion & enable faster and safer aisle passage

**Cal Teach, Santa Cruz** — Intern

NOVEMBER 9, 2018 - MARCH 22, 2019

- Guided 2 middle school classrooms with 60 7/8th grade students in Java coding projects & assignments by asking leading questions, explaining concepts, and writing pseudocode
- Taught 3 introductory lessons about coding basics such as plotting points, drawing shapes, and creating moving images
- Adjusted to using new Javascript programming IDE CodeNaturally in the classroom

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## PROJECTS

**Bus Usage Monitoring** — Python, Go, HTML5, CSS3

View on [GitHub](#)

- Senior capstone project that uses wifi probing to help transportation services deploy an efficient amount of buses depending on the number of people on a bus or in an area
- Developed a bus traffic simulator & backend component of bus management system handling responses & database queries

**N-Queens Solution Generator** — Java, Unix

- Calculates the answers to a chessboard problem in which no 2 queens can be on the same row, column, or diagonal, with user input n as the number of queens
- Utilizes 2D arrays, recursion, iteration & error checking

**Matrix Calculator** — Java, Unix

View on [GitHub](#)

- Performs fast matrix operations such as addition, subtraction, multiplication, exponentiation, and transposition
- Uses a space- and time-efficient object List Abstract Data Type (ADT) to represent matrices

**Calculator** — Javascript, HTML5, CSS3

Try in [Browser](#) | View on [GitHub](#)

- Performs all basic math operators: addition, subtraction, multiplication, division
- Originally designed with CSS3 & has keyboard functionality

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## SKILLS

**Languages:** Java, C, Python, JavaScript, HTML5, CSS3, Verilog

**Technologies:** Git, Bash, Unix, Linux, Visual Studio, VirtualBox, Xilinx Vivado, AutoCAD, Matlab, I2C, Jira, Scrum

**Spoken Languages:** English, Vietnamese, Spanish

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## ACTIVITIES

- Clubs: Society of Asian Scientists & Engineers, Society of Women Engineers, Circle K International