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 Quarter 2018
- Courses Taken: Computer Networking, Operating Systems, Data Structures, Algorithms & Abstract Data Types, Computer Systems Design, VLSI Digital System Design, Computer Architecture, Electronic Circuits, Multivariable Calculus, Technical Writing, Python Programming, C Programming

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

EXPERIENCE

Bay Area Rapid Transit (BART), Oakland — Systems Engineering Intern JUNE 22, 2020 - PRESENT

- Wrote analysis of requirements, specifications, and Bill of Materials for procurement after researching potential new sensors to improve current fare gates and sensors
- Developed firmware & python scripts to implement 3 types of sensors (ultrasonic, thermal, infrared) with Raspberry Pi 3B

Tech4Good Lab, Santa Cruz — Undergraduate Research Assistant JANUARY 6, 2020 - PRESENT

- Studied social computing, the intersections of computational systems & computer interaction under guidance of Professor David Lee
- 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 Relate, an activity platform for small groups

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
- Held weekly meetings with host teacher to better implement new effective teaching strategies, resulting in a 6% average project grade increase

SKILLS

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

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

Spoken Languages: English, Vietnamese, Spanish

ACTIVITIES

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