Neil Bisht

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LinkedIn Github

Education

- **University of California, Santa Cruz** — Santa Cruz, CA
  Bachelor of Science in Computer Science; GPA: 3.88 / 4.0 — *Oct. 2020 – Present*
- **Relevant Coursework**: Data Structures and Algorithms, Computer Systems and C Programming, Computer Systems and Assembly Language, Programming Abstractions in Python, Discrete Mathematics, Probability and Statistics for Engineers
- **Awards**: Dean's Honors List (3 contiguous quarters)
- **Activities and Organizations**: Tech4Good, Tau Kappa Epsilon, College Scholars Program, ACM

Work and Leadership Experience

- **Tech4Good Laboratory** — Santa Cruz, CA
  UI Components Team Members — *September 2021 - March 2022*
  - Worked in a 4-member team to build responsive web pages for research in social computing
  - Collaborated with designers through Figma to design and update existing web pages, increasing user experience by 11%; analytics were derived from surveys sent out to users
  - Implemented flexbox paradigm and responsive design in components that were previously fixed-width

- **VIP (Very Important Player) Club** — Lake Fores, CA
  Vice President — *September 2018 - March 2020*
  - Coached developmentally disabled children play soccer under the AYSO VIP division; led team to finals
  - Raised money and utilized funds to promote the club at rush events; members increased by 8-10 yearly
  - Acquired valuables skills through coaching including: patience, persistence, and sincerity

- **El Toro High School** — Lake Forest, CA
  Algebra I Peer Mentor — *August 2019 - March 2020*
  - Tutored fundamental Algebra I concepts to those who struggled in a class of 30 freshmen students
  - Designed engaging Kahoot and group activities that facilitated a 3% increase in following test averages

Projects

- **RSA Key Generator, Encryptor, and Decryptor - C**:
  - Built public and private key generators and an RSA encryptor and decryptor using the mathematical formulas behind RSA encryption
  - Utilized GNU's Multiple Precision Arithmetic library to handle arbitrarily large numbers that C's standard library can't
  - **Tools**: GNU MP Library
- **Motion Detector - Python**:
  - Employed the sliding window mean and standard deviation methods to detect motion in a stream of images
  - Motion is detected if a pixel's RGB value is out of range based on the image's discounted average and standard deviation
  - **Tools**: NumPy, Matplotlib
- **Comparison of Sorting Algorithms - C**:
  - Implemented and compared four sorting algorithms: Insertion Sort, Shell Sort, Heap Sort, and Quick Sort
  - Sorts a random number array of an inputted size with a specified sorting algorithm of the user's choosing (or all)
  - Produces statistics on the number of moves and compares to compare each algorithm on an arbitrary array

Skills

- **Languages**: Python, C/C++, JavaScript, HTML, CSS, MIPS Assembly **Technologies**: Unix, Git, Figma