James Contini

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Objective

I am driven by a deep desire to leverage my technical knowledge of computer science, innate curiosity, and passion for collaboration to develop innovative solutions for challenging problems, all with the aim of making a positive and meaningful impact on the world.

Education

UC Santa Cruz, Computer Science B.S.
- GPA: 3.68/4.0
- Vector Calculus, Data Structures & Algorithms, Computer Systems in C and Assembly, Engineering Principles of Electronics.

San Rafael High School
- GPA: 4.41/4.0
- AP Physics, AP Computer Science, Engineering and Physics Academy, AP Spanish, French 1 & 2.

Experience and Implementations

SlugSat, CubeSat Satellite Programming Team – *UC Santa Cruz*   Spring 2023 - present
- Developing an On-Board Computer (OBC) for a distributed system, facilitating communication between the satellite's systems, including orientation sensors and Detumbler - Currently seeking funding for a planned launch in November 2023.

Data Structures and Algorithms – BigInteger ADT, *CSE 101 – UC Santa Cruz*   Spring 2023
- Created a Math Abstract Data Type (ADT) for handling large integers in C++.
- Improved performance by identifying patterns in seemingly random inputs. Utilized gnuplot and bash for in-depth analysis, resulting in enhanced functionality and efficiency.

Computer Systems in C – Huffman Module, Final Project– *CSE 13s UC Santa Cruz*   Fall 2022
- Developed a Huffman Encoding Module and accompanying test harness in C during a UC TA strike.
- Adapted to the absence of TAs by independently studying and implementing bit vector stack, node stack, and priority queue.
- Module could print program statistics and compress or decompress anything spanning from a book to a movie.
  - Demonstrating resourcefulness and achieved a personal score of 96/100, well above the class median 62/100.

Academy of Engineering and Technology – Embedded Systems, *San Rafael High School*   2019 - 2021
- Completed four semester-long projects in teams of two, focusing on embedded systems.
- Successfully addressed signal noise complications in projects such as the Solar Tracker and Autonomous Vehicle by devising a sliding window algorithm to reduce photoresistor noise and improve performance.

Amigos de Las Américas, *Project Facilitator – personal*   Summer 2019
- Collaborated with community leaders and members in El Limón, Panama, to accomplish a community-proposed project.
- In Spanish, Coordinated the purchasing of building materials and hiring of contractors to construct an official town welcome sign.
- Demonstrated leadership and effective communication skills in a cross-cultural environment.

Skills and Strengths

C, C++, JS, Python, RISC-V Assembly, Bash, Unix, Google Sheets API.	Curiosity and enthusiasm for learning, especially regarding everyday items. – Excellent interpersonal skills.	Circuit design, multimeters, CAD: Fusion 360, laser cutting, power tools, adhesives, woods, plastics.

Recognitions and Awards

Most Optimized Rocket, AP Physics Academy Achieved the highest flying rocket in the class with successful parachute deployment. Rivaled altimeter readings of previous years.	**World Languages' Department Award**, AP Spanish "*James brings his love of language learning to class every day. It has been a joy to watch his Spanish develop over the last few years and he brings not only humor and enthusiasm but also insight and reflection*". - Department head	**UCSC 100m school record** Set at SAC State, 2022.