



RUBEN PEREZ

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EDUCATION

Bachelor of Science | *Computer Engineering with a Concentration in Robotics* September 2017 – June 2021
University of California, Santa Cruz Santa Cruz, CA

WORK EXPERIENCE

Advanced Farm Davis, CA
Software Engineering Manager of Testing October 2022 – Present

- Successfully managed a cross-functional team of 3 software developers and 3 software support engineers
- Onboarded and trained new team members, providing mentorship and guidance emphasizing the significance of scalability and best practices in software development to aid in their growth and professional development
- Proposed, prioritized, and resourced 26 projects in alignment with overarching company goals
- Conducted weekly reliability meetings to present error pareato analysis, resulting in a significant improvement in robot uptime from 85% to 95%
- Increased software support productivity from 10 to 60 robot picking hours per support hour
- Led testing team to develop and hand off user-oriented scripts to technicians, enabling the successful build and commissioning of 20 robotic strawberry harvesters

↳ *Software Test Engineer* November 2021 – October 2022

- Commissioned and validated a fleet of 16 robotic strawberry harvesters, ensuring the successful integration and functionality of their sub-assemblies and individual components
- Developed code using the Twisted framework and asynchronous state machines for testing hardware sub-assemblies
- Owned the drive controller portion of the code base, taking responsibility for it's development and maintenance
- Implemented a position PID controller as well as the ability to manually command target torques through the use of a joystick to combat unforgiving terrain in apple orchards
- Effectively reduced position following error by a factor of 5 throughout the course of a harvesting season by analyzing CAN frames and fine-tuning position, velocity, and current gains

↳ *Software Support Engineer* March 2021 – November 2021

- Monitored a fleet of strawberry harvesters in the field, providing software support and conducting maintenance to optimize performance and minimize downtime
- Set up test protocols and collected test and performance data to inform R&D activities
- Worked on pneumatic, mechanical, and electrical systems
- Helped maintain custom debian packages and python code

B & T Farms Gilroy, CA
Irrigation Manager March 2020 – January 2021

- Oversaw more than 500 acres of bell pepper, lettuce, beans, tomato, and corn
- Managed 17 pumps and re-organized watering schedule to allow all fields to be irrigated daily
- Applied fertilizer and pesticides routinely to maintain plant nutrients at correct levels
- Received private applicator certificate for pesticides
- Worked with more than 100 people during harvest season and delegated tasks to keep a constant workflow
- Required high levels of motivation and work ethic, averaged 80 hour weeks

University of California, Santa Cruz Santa Cruz, CA
Recreational Leader September 2018 – March 2020

- Led 20-person groups for three-day backpacking trips in the Santa Cruz Mountains
- Built community and managed morale in a physically demanding environment
- Managed pre-activity logistics, including client coordination and gear preparation

SKILLS

Languages: English (Fluent), Spanish (Native)

Programming: Python (NumPy, SciPy, Matplotlib, Twisted, ZMQ), MATLAB, C++, Bash, Git

Software: ROS, Github, Linux, Gazebo, Excel, Fusion 360, CANopen