Garret Castro

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EDUCATION

Enrolled at the University of California Merced, Merced, CA

Bachelor of Science, Computer Science and Engineering - Chancellor's Honor List, GPA **3.684**

Expected Graduation **Fall 2025**

TECHNICAL SKILLS

Languages: Python, HTML/CSS/JS, Typescript, C++, SQL, Java

Frameworks/Libraries: React, Angular, Flask, OpenCV

RESEARCH

SupHerb Crop Yield Estimation (August 2024-Ongoing) (OpenCV, Python, React)

- Directing as team lead in developing a computer vision model to predict cilantro harvest yields
- Designing, ordering parts for, assembling, and programming the Farm-ng Amiga rover for image capture
- Processing cilantro image data for harvest prediction model using Farm-ng Amiga's FarmOS interface
- Eliminating the need for human prediction by increasing the precision of automatic crop yield estimation

Capstone Team Formation Tool (August 2024-Ongoing) (Python, Numpy, Pandas, React)

- Developed a novel skills-based and preferences-based algorithm to assign students to group projects
- Automated data input via parameterization to work on more datasets with less user input
- Optimized algorithm by eliminating unnecessary computations, decreasing runtime by 50%

PROJECTS

UC Merced GE Badge Finder (React, Flask, REST API)

- Developed a web application that finds every UC Merced course with given GE badge criteria
- Utilized web scraping to collect course data and converted it into a REST API
- Eliminated the need for login/navigation, reducing the course identification process to seconds

Minecraftle (Flask, Javascript)

- Contributed to the upkeep and enhancement of a browser game for over 600,000 players
- Fixed game-breaking bugs, allowing win and loss conditions to be calculated as intended
- Resolved inconsistencies in the game's high contrast mode, facilitating play for colorblind users

AWARDS/CERTIFICATES

AP Scholar with Honor

Demonstrated exemplary college-level achievement through Advanced Placement Exam performance

CompTIA Security+ 601 Certified

Demonstrated expertise in securing IT systems, identifying and mitigating security threats, and implementing robust security measures to safeguard sensitive information