Andy Wu

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EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA BARBARA Santa Barbara, CA
Bachelor of Science − Computer Science
Academic GPA: 3.71, Dean's Honors (Engineering)

TECHNICAL SKILLS

Programming Languages: C++, Python, Java, HTML, CSS
Tools: Git, PyTorch, Raspberry Pi, Solidity

EXPERIENCE

UCSB Computer Science Capstone − Blockchain Rug-Pull Token Detector *September 2022 – March 2023*

- Partnered with Forta Network mentors to develop a detection bot for identifying malicious rug-pull smart contracts on the Ethereum blockchain network
- Researched, designed, and implemented a series of heuristics using Python for static abstract syntax tree analysis of deployed token smart contracts
- Achieved a robust 91.8% recall rate during testing and deployed the detector bot on the Forta Network detectors page for public use

PROJECTS

FARMING ROBOTICS CHALLENGE *February 2023 – June 2023*

- Collaborated in Farm_ng's agri-tech competition to create a flexible data mule package for the Amiga robot
- Developed a data collection system utilizing Bluetooth connections between on-board and in-field Raspberry Pis, which was then refined and graphically displayed using a Python and Kivy GUI
- Engineered a computer vision system in Python to precisely align a Li-Fi laser charger to power sensors
- Enhanced safety during operations by implementing an object detector on the robot's frontal camera

2048 GAME AI *November 2021 – December 2021*

- Developed an AI in Python that plays 2048 using the minimax search algorithm with a score heuristic based on a weighted tile matrix, and optimized runtime through the implementation of alpha-beta pruning.
- Achieved an AI that consistently completed the game with an average highest tile of 2150

MASTERMIND WEB GAME *January 2021*

- Led a team at a hackathon to develop a Mastermind-type web game, focusing on web app development.
- Designed a fully functional Mastermind game, utilizing HTML and CSS for the front-end, and Java for back-end logic, and presented it during the event

RESEARCH

EARLY RESEARCH SCHOLARS PROGRAM *September 2021 – December 2021*

- Focus: uncovering gerrymandering in U.S. state electoral districting plans utilizing Markov Chain Monte Carlo (MCMC)
- Researched and designed a project plan that employed recombination MCMC methods to generate random districting plans, obtaining a non-partisan sample of voting outcomes

ACTIVITES

THETA TAU – PROFESSIONAL FRATERNITY COUNCIL REPRESENTATIVE *Sept. 2021 – Dec. 2021*