Casey Manning

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EDUCATION

Stanford University GRADUATING JUNE 2024

The Nueva School, San Mateo 2016 - 2020

Electives include: Into & Advanced Machine Learning, Full Stack Web Development, Functional Programming, Self-Balancing Robots, Physics Research, Computer Security, Computer Aided Design, Linear Algebra

EXPERIENCE

Teaching Introductory Programming APRIL 2017 - PRESENT

Teach programming to students 9 - 14 years old. Taught 10 students overall, created custom curriculum ranging from basic computer science in Scratch to Java AP CS. Projects include an image triangulation program, a networked chat app, and an automated Raspberry Pi pigeon feeder.

FRC Robotics SEPTEMBER 2016 - 2020

Participated on my school's FIRST Robotics team during my time at high school. Worked on programming projects, including a vision system to automatically align with a target using a camera, a system to automatically calibrate camera exposure, and communication protocols between different devices on the robot. Our team was awarded the "Autonomous Mode Challenge Award" during an Oct 2017 pre-season FRC tournament, based on the work I had done with another student on the vision system. Also trained incoming programming members in Java.

Playground Global JUNE 2019 - AUGUST 2019

Worked as a robotics intern at Playground Global. On a team with other interns, I set up and programmed a robotic arm to autonomously cook omelettes. I designed and trained a machine learning vision system in Keras to control the cooking routine. I also designed and built an associated iOS app and database to let users order and customize omelettes for pickup from the robot.

PROJECTS

Amanu — iOS Puzzle Game JUNE 2016 - AUGUST 2016

During the summer before my freshman year at Nueva, I created a puzzle game called Amanu, in which the player solved randomly generated puzzles by changing the orientation of gravity to their advantage. Released on the app store at the end of the summer: https://itunes.apple.com/us/app/amanu/id1142733267

Machine Learning Class Projects AUGUST 2017 - DECEMBER 2017, JANUARY 2019 - JUNE 2019

Reinforcement learning program to play space1.io, an online game where each player dodges and shoots bullets. GAN which generated variations of 3D models in Blender.

3D Multiplayer Strategy Game in Unity SEPTEMBER 2016 - JUNE 2017

Created a 3D strategy game using the Unity game engine.

3D Modeling in Blender SEPTEMBER 2017 - PRESENT

Various 3D modeling projects throughout highschool: https://caseymanning.github.io/artwork

SKILLS

Java   Python   Robotics   3D Modeling [Blender & Fusion 360]   Keras   Swift   C#   Unity   JavaScript