Kingsley Kofi Appiah

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Education

Reed College - Portland, OR
Portland, OR
Computer Science and Mathematics August 2024 - May 2028
Relevant coursework: Computer Science I, Calculus, Deep Learning, Computer Vision

Experience

FARMERCYTECHNOLOGIES.LTD
Kumasi, Ghana
Hardware Team Member January 2023 – July 2024

- Utilized Fusion 360 to create precise, functional, and aesthetically appealing 3D models for enclosures of various devices.
- Assembled multiple hardware prototypes, accelerating the product development timeline by 9.6%.
- Ensured adherence to stringent quality standards for hardware components, resulting in a 13% reduction in product defects.

Projects

Machine Learning

- Built a dual-axis solar tracker integrated with a machine-learning model to maximize solar irradiance capture by 54%**,** achieving a 49.3% increase in power production compared to static solar panels.
- Developed a machine learning model to predict passenger survival rates on the Titanic, achieving a 76% accuracy score, and utilized Matplotlib and Seaborn to analyze passenger data and identify key factors influencing survival.

Computer Vision

- Built a real-time hand-tracking system using MediaPipe, accurately identifying and tracking key hand landmarks.
- Built an interactive hand-tracking ping pong game using OpenCV and Mediapipe to detect hand movements in real-time, hand landmarks to simulate paddle movements, allowing users to control the game with natural hand motions.
- Built a face-tracking system using OpenCV, utilizing the Haar Cascade classifier for real-time facial detection and tracking.

Automatic Plant Watering System

- Built an automated plant watering system using sensors to detect soil moisture levels and control water distribution.
- Utilized ESP32, capacitive moisture sensor, and 12V relay to monitor soil conditions and activate a water pump when needed.

Automated Water Pumping System

- Designed and built an automated water pumping system using an Arduino Uno board to control and monitor water flow.
- Integrated a flow rate sensor to measure and regulate water flow and implemented a 4x4 keypad system to allow user input for customizing water flow rates and pumping duration.

Skills

Languages: Python, C++
Frameworks: Tensorflow, Git