Yash Kapoor

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Education

Expected Graduation:
May 2022

University of Maryland, College Park

University Honors

B.S., Computer Engineering | Minor in Mathematics

GPA: 3.6/4.00

Work Experience

Jan 2021 – Present

Teaching Assistant

University of Maryland, College Park – A. James Clark School of Engineering

- Assisted students in understanding a variety of topics such as **circuits**, **wireless communication**, **signal processing** and **computer vision**
- Closely guided 12 students to experiment with and understand relevant technologies

May 2021 – Aug 2021

Head Research Assistant

University of Maryland, College Park – A. James Clark School of Engineering

- Led a small team of undergraduate and graduate students to research **IoT** technology
- Utilized existing resources to develop a **low-cost system** for **swarm technology** to be used for humanitarian acts such as disaster relief
- Developed algorithms to estimate flight parameters of drones using **image processing** to be used on a **Raspberry Pi 4** (with a **PiCamera** as video input) with minimal latency

Dec 2020 – May 2021

Backend Web Developer

CORA – Combating Overdoses in Rural Areas

- Created an API using **Node.js** and **Express.js** to allow communication between the frontend and a **MongoDB** database
- Applied **Python** libraries such as **Requests**, **BeautifulSoup4** and **Pandas** to gather and process data to include more resources in the organization's databse, increasing area coverage by 30%

Aug 2020 – May 2021

Frontend Web Developer

WMUC Radio

- Built an interactive and engaging user interface for a new website for WMUC-FM, a radio station licensed to the University of Maryland, using **ReactJS** with **React-Bootstrap**

The Hare

- Revamped UI for news website with 2000+ visitors per month using **VueJS**, leading to increase in website traffic by 40%

Aug 2019 – March 2020

STEM Tutor

University of Maryland, College Park – College of Computer, Mathematical and Natural Sciences

Projects (More projects at GitHub.com/Yashkaps)

Game with AI

- Implemented the popular board game Connect-4 for single and 2 player modes using **Python's PyGame** and **NumPy** libraries
- AI makes decisions based on **MiniMax Algorithm** with depths of 2 (Easy), 3 (Hard) or 4 (Impossible)

COVID-19 Cases & Youth Population Correlation

- Used various **Python** libraries such as **Pandas**, **Requests**, **Matplotlib**, and **SciKit-Learn** to determine the relationship between rising COVID-19 cases and the youth population in counties all over the U.S.

Job Application Filter for Gmail

- Used **Gmail API** with **Java** to only retrieve emails relevant to the job application process and update a spreadsheet based on the email contents

Skills

Web Development: HTML/CSS, Javascript, ReactJS, VueJS, ExpressJS, NodeJS, Bootstrap
Data: Python (Pandas, BeautifulSoup, Matplotlib, Numpy), PostgreSQL, MongoDB, MATLAB
Machine Learning: Scikit Learn, Keras, Tensorflow
Other: Git, Java, C++, Ruby, OCaml, Assembly, Android Studio
Engineering: Arduino, Raspberry Pi 4, ESP-32, Microelectronics, Verilog, Circuit Development (Analog, Digital), Controller Design, Signal Analysis, Embedded Systems