

# Yash Kapoor

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[yashkaps.github.io/](https://yashkaps.github.io/)

## Education

**Expected Graduation:**  
May 2022

University of Maryland, College Park

*University Honors, Dean's List (S20, F20)*

**B.S., Computer Engineering | Minor in Mathematics**

GPA: 3.7/4.00

## 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**
- Supervised lab sessions and office hours to provide hand-on experience with 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*

- Used **Node.js** and **Express.js** to create an API to facilitate communication between the frontend and a **MongoDB** database
- Applied **Python** libraries such as **Requests**, **BeautifulSoup4** and **Pandas** to gather and process data to suit the organization's purposes

Aug 2020 – May 2021

### Frontend Web Developer

*WMUC Radio*

- Used **React.js** with **React-Bootstrap** to build an interactive and engaging user interface for a new website for WMUC-FM, a radio station licensed to the University of Maryland

*The Hare*

- Utilized **Vue.js** with **Bootstrap-Vue** to revamp UI for news website with 2000+ visitors per month

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](https://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