# MUKUND SHANKAR

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#### **EDUCATION**

BSc. Computer Science & Mathematics, University of Maryland

Expected December 2024

Minor in Robotics & Autonomous Systems.

Dean's List.

Global Communities Honors Program.

Relevant Coursework: Algorithms, Data Science, Programming Languages, Object-Oriented Programming.

GPA: 3.62

Nominated by and awarded the Golden Visa by the UAE government under the outstanding student category.

#### TECHNICAL SKILLS

Backend: Python, Java, C, Ruby, OCaml.

Networking/Front-end: SQL, HTML, CSS, SwiftUI.

### **EXPERIENCE**

## Undergraduate Teaching Assistant

August 2022 - Current College Park, MD

University of Maryland Computer Science Department

- Teach discussion classes attended by 45 students twice a week, developing course concepts and proctoring quizzes.
- Hold office hours for over 300 students, helping students understand and implement complex Java projects.
- Organize additional review sessions before exams to explain OOP course content to 200+ students.

### Intern and Youth Conference Participant

January 2020

International Renewable Energy Agency

Abu Dhabi, UAE

- Proposed using AI to predict outages to reroute energy, recognized by Director-General of European Commission.
- 1 of 20 selected based on leadership potential to interact with international dignitaries during debates.
- 1 of 45 selected globally based on academics to engage in debates to present renewable energy solutions.

### **PROJECTS**

**Aerial Object Detector.** Applied transfer learning techniques on the deep learning YOLOv5 model to identify airborne balloons with a Mean Average Precision score of 91% as part of the Northrop Grumman Innovation Hack Week 2023. This project won first place in the hackathon. Find the code here.

Holistic Health Helper App. Developed a tool to help users develop a dynamic health plan using large language models. Currently working on mobile app. This app is currently being considered for UMD's startup incubator.

Heart Disease Prediction Software. Built a machine learning model which predicts heart disease at 91% accuracy using random decision forests in python in libraries such as numpy, pandas, sklearn, and seaborn. Find the code here.

**Sports News Application** Developed an application in Java Swing with a UI to allow users to view updated data on multiple sports through one user-friendly interface. Implemented through webscraping. Find the code here.

### **EXTRA-CURRICULAR ACTIVITIES**

- Engineers Without Borders
- Robotics @ UMD
- Open Sourcery Software Devlopment club
- UMD Club Tennis
- BigThink AI Club

## LANGUAGES

Fluent in English, French, Tamil, Hindi/Urdu, Advanced in Arabic.