Arjun Vaidya

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Education

University of Maryland, College Park Aug. 2021 – May 2025

Bachelor of Science in Computer Science | GPA: 4.0

Relevant Coursework: Data Structures, Algorithms, OOP, Programming Languages, Computer Systems, Database Design, Compilers, Data Science, Discrete Math, Calculus, Linear Algebra, Probability Theory, Statistics

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, SQL, C, HTML, CSS, OCaml, Ruby, PHP
Frameworks & Technologies: React, Next.js, Redux, Snowflake, MongoDB, Pandas, NumPy, Jest, JUnit
Tools: Git, Azure DevOps, SonarQube, Vercel, Linux

Experience

Software Engineer Intern June 2024 – August 2024

Dow Jones, OPIS *Gaithersburg, MD*

- Created a process to share client data directly through **Snowflake**, resulting in **10% reduction** in costs.
- Automated data share creation process using **Python**, **Azure**, and **SQL** with an **MVC pattern**.
- Developed SQL tasks for annual data partitioning, saving ∼**2 hours** of manual work each year.
- Deployed a data share for a **live client** and authored documentation in **Confluence**.

Teaching Assistant Aug. 2022 – Present

Department of Computer Science, UMD *College Park, MD*

- Led discussions for 30+ students in **Object Oriented Programming** using **Java**, and **Discrete Structures**.
- Responsible for assisting students with course material, hosting office hours (∼600 students), supplementing instructional content, and grading assignments.

Software Engineer Intern June 2023 – Aug. 2023

Dow Jones, OPIS *Rockville, MD*

- Enhanced user communication by developing a web page for release notes using **React**, **Redux**, **TypeScript**.
- Improved data presentation and user experience with intuitive grid views and themes.
- Increased test coverage by 50% using **Jest** and **SonarQube**.

Research Intern June 2022 – Aug. 2022

Institute for Systems Research, UMD *College Park, MD*

- Analyzed and simulated 500k instances of intruder-defender interactions using **Python**, **Pandas**, **Scikit-learn**, and **Numpy** for the Perimeter Defense Problem.
- Classified and selected optimal algorithms with 80% accuracy through Exploratory Data Analysis techniques.
- **Co-authored** a paper published in the **2023 IEEE/RSJ** International Conference.

Projects

Speechify | *Python, Flutter, Flask, OpenCV, PyTesseract*

- Awarded **People's Choice Hack** (out of 125 projects) at Bitcamp Hackathon.
- Collaborated with three teammates to develop an app for dyslexic users using **Flutter Text-to-Speech** and **Optical Character Recognition** to read text from photos.

Bloom | *React, Next.js, MongoDB, Axios, Cheerio, Puppeteer, Nodemailer, Tailwind*

- Created a full-stack application to notify users about seat availability from UMD course web page.
- Implemented **web scraping** to extract course data and stored it in **MongoDB Atlas**.
- Scheduled hourly updates using **Cron Job** and automated email notifications using **Nodemailer**.

FIRE Research Program | *Python, OpenCV, NumPy, DJITelloPy*

- Collaborated with team members and Dr. Nitin Sanket to develop motion planning algorithms using drones.
- Applied computer vision techniques on video and image data for **object detection** using template matching.
- Presented research findings at the UMD FIRE Symposium in November 2022.