Rishi Mulchandani

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Education

University of Illinois at Urbana-Champaign (GPA: 3.82/4.00) **May 2026**
Bachelor of Science in Computer Science *Champaign, IL*

Relevant Coursework: Data Structures, Probability & Stats, Software Design, Artificial Intelligence, Discrete Math, Linear Algebra

Clubs/Involvement: FOCAL Lab@UIUC Machine Learning Research Group, ACM, Association for Quantitative Trading Education

Technical Skills

Languages: Python, Java, C, C++, R, HTML/CSS, JavaScript, JQuery, ReactJS, Visual Basic
Developer Tools: Git, Docker, VS Code, Jupyter, Firebase, WordPress, SharePoint, PyCharm, Power Automate
Technologies/Frameworks: Numpy, Pandas, scikit-learn, matplotlib, Flask, Express.js, Node.js, PowerShell
Additional Skills: Linux, Flutter, Microsoft Office

Experience

Criterion Systems **June 2023 – Present**
Software Engineering Intern *Vienna, VA*

- Managing backend automation and scripting for the Mercury Correspondence System SharePoint site for the US Department of Agriculture (USDA) Forest Service (FS).
- Utilizing Microsoft SharePoint, PowerShell, Power Automate, and Excel VBA to resolve technical issues for the FS Mercury Correspondence System, ultimately reducing memory usage by 35%.
- Led the intern proposal group project to successfully develop a solution for a service-based innovation model.

Johns Hopkins University Applied Physics Laboratory **September 2022 – May 2023**
Research/Machine Learning Intern *Laurel, MD*

- Mentored by Dr. Caglar Caglayan to develop a research paper/study on clinical decision-making under uncertainty and medical prediction with ML algorithms and presented to the IEEE ISEC conference.
- Using data from the National Hospital Ambulatory Medical Care Survey (NHAMCS), successfully developed an ML framework using Logistic Regression, Random Forest, and XGBoost algorithms to predict admission and critical care outcomes in patients presenting to emergency departments and accurately identified socio-demographic and clinical factors associated with admission/outcomes.

University of Maryland, Baltimore County **June 2022 – January 2023**
Research Assistant *Baltimore, MD*

- Worked as a research assistant in Dr. Riadul Islam's UMBC VLSI-SOC Group, and collaborated with undergraduate, Masters, and Ph.D. students as well as Dr. Islam on to create models and collect data using CNNs, Reinforcement, and Supervised Learning for self-driving cars.

Maryland Innovation and Security Institute **June 2021 – August 2021**
Cybersecurity Intern *Columbia, MD*

- Learned about cybersecurity and applied knowledge to real-world national cyber problems. Led a group of 6 interns conducting and presenting on a case study on an emerging cyber threat.

Projects

AI Study Plan Generator App | *Flask, Python, OpenAI API, React, NodeJS, Firebase* **January 2024**

- Web app using OpenAI's LLM to generate study plans and practice questions from inputted audio/text files.
- React frontend and Flask backend breaking down content into sizeable chunks and providing practice study problems, making use of Python modules for PDF text extraction and audio transcription.

Stack Overflow Question Scraper | *Python, React, NodeJS, ExpressJS, MongoDB, CORS* **December 2023**

- Python program to scrape data from Stack Overflow to grab top 50 new questions (question title and URL).
- Scraped data then stored in MongoDB database and displayed to user via React App.

Gym Workout App | *HTML/CSS (SCSS), JavaScript, React, NodeJS, Firebase* **August 2022**

- Created a React web application to plan, create, and track gym workouts on a weekly basis.
- Processed user-inputted information in the back-end of the app to return an organized list and plan of various potential workouts.