VARUN MATHUR

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Education

University of Waterloo | **April 2028**
BCS, Honours Computer Science (Co-op) | CGPA: (3.8/4.0) | *Waterloo, ON*
- Recipient of President's Scholarship of Distinction
- Active member of the Computer Science Club and Data Science Club
- Excellent Academic Standing

Technical Skills

Languages: C, Python, SQL, HTML, CSS, Javascript, Racket, R, TypeScript, React JS
Developer Tools: Git, MS Azure, Bash, MS Office Suite
Libraries: NumPy, Pandas, Matplotlib, Scikit-Learn
Certifications: CS50's Intro to Programming with Python (Harvard), AI and ML for Youth Innovators (NUS)

Experience

Alaan (YC W23) | **June 2024 – Present**
Engineering & Data Insights Intern | *Dubai, UAE*
- Engineered a **Python** script leveraging **OpenAI GPT-4's Optical Character Recognition capability** to extract information from receipts, **replacing legacy process and boosting accuracy and fill rate by 30%**. This automation significantly reduced human intervention and streamlined the process.

SpeedMart | **May 2023 – July 2023**
Software Engineering Intern | *Remote*
- Developed core functionalities and interfaces using **React.js**, focusing on efficient state management. Contributed to a notable **15% increase in user engagement** on the company's talent matching platform.
- Assisted in spearheading software testing initiatives, utilizing **Selenium WebDriver** to meticulously craft and execute comprehensive test cases, resulting in a **30% decrease in post-release defects**.

Ultreos | **June 2022 – July 2022**
Data Analytics Intern | *Dubai, UAE*
- Utilized **Python** for data analysis, collaborating with teams to drive targeted debt collection and credit verification strategies, resulting in a credible **10% increase in successful debt recoveries** from financial sector clients.
- Streamlined data migration from Excel to MS Access, ensuring Oracle compatibility, and **reducing processing time by 20%**, facilitating smoother operations and improved efficiency overall.

Hewlett Packard Enterprise | **July 2021 – September 2021**
Summer Intern | *Remote*
- Led a cooperative team effort to successfully implement an **AI and ML project** (Air-O-Grade) on **Microsoft Azure**.
- Project aimed at predicting concentrations of harmful gases (CO, NO2, NMHC's) using **automated ML, pipelines, and Python programming**. Achieved an impressive overall **accuracy of 95%** with the predictive model.
- Demonstrated the project's success through engaging presentations to industry experts, professors, and students, showcasing **effective communication and presentation abilities.** The presentations were well-received by an audience of **200+ attendees**, further emphasizing the project's impact and reach.

Projects

Amazon Clone | *HTML, CSS, Javascript* 🔗
- Designed and implemented an Amazon clone using **HTML, CSS, and JavaScript**, emphasizing proficiency in front-end development and **responsive design**.
- Developed key features such as dynamic product listings, and an interactive shopping cart/checkout page.

Tic-Tac-Toe Game | *Python, MySQL* 🔗
- Developed Tic-Tac-Toe game in **Python**, showcasing proficiency in programming logic and algorithmic thinking.
- Utilized **MySQL** to persistently store game data, allowing users to track their performance over multiple sessions.

Air-O-Grade (Group Project) | *Python, Microsoft Azure* 🔗
- Implemented pipelines for **data cleaning** using clip value component, ensuring dataset quality by handling null values.
- Assisted in designing a **automated ML model** for predicting Non-Methane Hydrocarbons concentration. Applied **regression techniques** and conducted model evaluations to identify the most effective algorithm.
- Contributed to team effort in **developing pipelines** for a **Decision Forest Regression model** predicting CO concentrations. Executed model scoring and evaluation employing metrics such as **Mean Squared Error** and other parameters.