Varun Mathur

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Education

University of Waterloo   **April 2028**
Bachelor of Computer Science (Co-op) | *CGPA: 3.8/4.0*   *Waterloo, ON*
- President's Scholarship of Distinction worth **$5000**
- Active member of the Computer Science Club and Data Science Club
- Excellent Academic Standing

Skills

Languages: Python, Javascript, C++, C, TypeScript, SQL, Racket, R, HTML, CSS
Frameworks: React.js, Express.js, Node.js, Next.js, Tailwind CSS, Shadcn UI
Tools & Technologies: MySQL, PostgreSQL, Git, Microsoft Azure, Bash, MS Office Suite, PowerBI
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 – August 2024**
Engineering & Data Insights Intern   *Dubai, UAE*
- Engineered a **Python** script leveraging **OpenAI API's Optical Character Recognition capability** to extract information from receipts, **replacing legacy processes and boosting accuracy by 30%**. This automation significantly reduced human intervention and streamlined the processes.

SpeedMart   **May 2023 – July 2023**
Software Engineering Intern   *Remote*
- Revamped 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 craft and execute meticulously 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**
AI Research Intern   *Remote*
- Led a cooperative team effort to successfully implement an **AI and ML project** (Air-O-Grade) on **Microsoft Azure**.
- Utilized **Azure pipelines, Python, and automated ML** to develop predictive models for CO, NO2, and NMHCs concentrations, achieving a **95% accuracy** in air quality predictions.
- Communicated complex technical details to **200+ industry experts and academics**, earning positive feedback and driving broader adoption of AI-driven environmental monitoring solutions.

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.
- Assisted in designing an **automated ML model** for predicting Non-Methane Hydrocarbons concentration. Applied **regression techniques** and conducted model evaluations to identify the most effective algorithm.
- Contributed to the 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**.