

VARUN MATHUR

📞 (437) 662-5443 | ✉️ v3mathur@uwaterloo.ca | 🌐 Varun Mathur | 🔄 varunmathur2005 | 🌐 Portfolio

EDUCATION

University of Waterloo

Sep 2023 - Present

Bachelor of Computer Science | **CGPA: 3.8/4.0**

Waterloo, ON

- President's Scholarship of Distinction

SKILLS

Languages: Python, TypeScript, C++, C, Javascript, SQL, R, HTML, CSS

Frameworks: React.js, Express.js, Node.js, Next.js, Tailwind CSS

Tools & Technologies: MySQL, PostgreSQL, Git, Microsoft Azure, AWS, Bash, PowerBI

Libraries: NumPy, Pandas, Matplotlib, Scikit-Learn, openCV, Tensorflow

EXPERIENCE

Alaan (YC W23)

June 2024 – August 2024

Engineering & Data Insights Intern

Dubai, UAE

- Engineered a **Python** automation leveraging **OpenAI API's OCR** and **AWS Lambda** to extract and process data from receipts, boosting accuracy by **30%** and reducing costs by **\$10,000** per month
- Architected an **AI-driven chatbot** using **Next.js**, **Node.js**, **PostgreSQL** and **OpenAI Assistants API**, leveraging vector embeddings to automate **50%** of user queries and generate over **500+** qualified leads monthly
- Collaborated with DevOps teams to deploy **CI/CD pipelines** using **Jenkins** and **GitHub Actions**, reducing code integration time by **20%** and enhancing development workflow

SpeedMart

May 2023 – July 2023

Software Engineering Intern

New Delhi, India

- Revamped core functionalities and interfaces using **Reactjs** with efficient state management, contributing to a **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 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

Hewlett Packard Enterprise

July 2021 – September 2021

AI Research Intern

Dubai, UAE

- Led the development of Air-O-Grade, an AI/ML powered air quality prediction system on **Microsoft Azure**
- Employed **Azure pipelines**, **Python** and **automated ML** to develop predictive models for CO, NO2, and NMHCs concentrations, achieving a **95% accuracy** in air quality predictions
- Delivered technical presentations on AI-driven environmental solutions to an audience of **200+** industry expert

PROJECTS

Knock-Knock | [Next.js](#), [Node.js](#), [React.js](#), [openAI API](#), [Overleaf REST API](#), [AWS S3](#), [TypeScript](#), [MySQL](#) | 🔄

- Deployed an **AI platform** to streamline job applications for students pursuing internships and full-time roles
- Built a **web scraper** automating lead capture from Apollo.com, processing **1,000+** prospects monthly
- Integrated a responsive dashboard and landing page with **shadcn/UI**, achieving a Google PageSpeed score of **90**
- **Automated cold outreach**, generating and sending personalized emails to recipients, cutting manual effort by automating up to **100+** emails daily
- Developed a cover letter generator, cutting customization time from **10** minutes to **10** seconds

BookWize | [Python](#), [Flask](#), [Jinja2](#), [HTML](#), [CSS](#) | 🔄

- Implemented a collaborative filtering recommender system using **Pandas** and **NumPy**, applying **cosine similarity** to deliver precise book recommendations from **10,000+** data points
- Designed a popularity-based recommender system with **Pandas**, generating a top 50 books list from **100,000+** ratings to highlight trending titles
- Constructed a robust frontend, deploying **Gunicorn** to enhance performance and scalability

Tic-Tac-Toe Game | [Python](#), [MySQL](#) | 🔄

- Created Tic-Tac-Toe game in **Python**, showcasing proficiency in programming logic and algorithmic thinking
- Applied **MySQL** to persistently store game data, allowing users to track their performance over multiple sessions