

Armaan Gupta

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EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Computer Science, 3.7 GPA

Sept. 2024 – Apr. 2029 (expected)

Related Coursework: Algorithm Design and Data Abstraction, Tools and Techniques for Software Development, Calculus and Linear Algebra

TECHNICAL SKILLS

Languages: Java, Python, C, C++, SQL, JavaScript, TypeScript, HTML/CSS, Racket, R, Scheme

Frameworks, Tools, & Libraries : React, Node.js, Git, VS Code, AWS, TensorFlow, PyTorch, Firebase, Angular, Next.js, Flask, pandas, NumPy, Matplotlib, OpenAI API, YOLO, OpenCV, Jupyter Notebooks, Google Colab, Tailwind, FastAPI, Vite, Three.js, SMOTE, Figma, Linux

EXPERIENCE

Camp Leader & Code Sensai

Jun. 2024 – Aug. 2024

Code Ninjas

Mississauga, ON

- Implemented interactive game development tutorials using Lua and **integrated debugging workflows**.
- Utilized **version control systems** to manage and refine projects while creating **reusable code templates** for game mechanics and logic.

CEO & Co-Founder

July 2023 – May 2024

LandingX

Remote

- Built **responsive websites** using React, Node.js, Three.js, and Tailwind, using and **Vercel/AWS** for hosting.
- Collaborated via **Git**, ensuring client needs were met through **agile workflows** with **npm & Vite**.

Innovator

Sep. 2022 – June 2023

TKS (The Knowledge Society)

Toronto, ON

- Developed a comprehensive **ML-driven** 8-year strategy for CIBC to attract and retain GenZ customers, integrating React, Node.js, and AWS to prototype a modern **mobile app and automation features**.
- Implemented custom architectures, including **CNN and RNNs**, using PyTorch to solve real-world problems, such as handwritten digit recognition with **99.5% accuracy** and image classification tasks.

PROJECTS

Armaan's World | *HTML/CSS, JS, React, Tailwind, npm, Node.js, Vite, Three.js*

🔗 repo link

- Developed a portfolio showcasing interactive **3D models**, smooth animations, and a modern UI using React and Tailwind, ensuring **full mobile compatibility** and responsiveness.
- Integrated email functionality with EmailJS and **optimized performance with Vite** for fast builds and efficient rendering.

ASD Prediction Model | *Python, Colab, NumPy, Pandas, Matplotlib, sklearn, pickle*

🔗 repo link

- Achieved **93%** cross-validation accuracy in detecting Autism Spectrum Disorder using **Decision Tree** and **Random Forest** models.
- Processed data with NumPy, pandas, Matplotlib, and SMOTE to handle imbalances and extract insights.
- Optimized models in Google Colab, leveraging scikit-learn for **hyperparameter tuning** and pickle for model storage.

Speed Estimation & Vehicle Tracker | *Python, OpenCV, ultralytics, NumPy, Argsparse*

🔗 repo link

- Built a CNN-based **vehicle detection and tracking** model capable of calculating vehicle speed, counting vehicles, and classifying types for detailed traffic analysis.
- Integrated **real-time** video processing with Supervision & OpenCV, leveraging **tqdm** to optimize performance.
- Streamlined model deployment and inference with requests, ensuring **efficient** and **accurate processing** for large-scale traffic datasets.