

Aditya Prasad

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EDUCATION

University of Waterloo

Waterloo, Ontario, Canada

Bachelors of Software Engineering + AI & Human-Computer Interaction Option

Sept. 2024 – Apr 2029

- Grade Point Average: 94.6% (3.98/4.00)
- Relevant Courses: Digital Computation, Data Abstraction & Implementation, Digital Circuits, Linear Algebra

TECHNICAL SKILLS

Languages: Python, C/C++, HTML/CSS, JavaScript, Java, TypeScript, VHDL

Frameworks: React, Next.js, Three.js PyTorch, Tailwind, Next, OpenCV, scikit-learn, Pandas, NumPy, Keras, YOLO

Developer Tools: Visual Studio, DEV C++, PyCharm, Heroku, Git, Unix, HuggingFace, Colab, AutoCAD, SolidWorks, FASTAPI, OpenAI API, RESTFUL API's, Vercel, LangChain, Supabase, MongoDB

TECHNICAL EXPERIENCE

AI Engineering Intern | *Python, HuggingFace, Colab*

Aug. 2024 – Present

Preamble AI

Pittsburgh, Pennsylvania, USA

- Developed **2** enterprise application integration prototypes, demonstrating **40%** improvement in workflow efficiency.
- Conducted market research on **5** AI safety trends, developing **2** proof-of-concept use cases with **90%** feasibility.
- Created **20+** test cases and identified **15+** critical bugs, improving platform stability by **25%**.
- Built a **Huggingface** Space demonstrating AI safety features, improving model robustness by **20%**.
- Updated **10+** user guides and API docs, improving clarity and accuracy by **30%**.

Machine Learning Engineer | *PyTorch*

Jan. 2025 – Present

WATOLINK

Waterloo, Ontario, Canada

- Analyzed **5+** scientific publications on neural networks and BCIs, focusing on non-invasive transcription methods.
- Evaluated **4 advanced EEG decoding models**, aimed to optimize brain signal interpretation efficiency
- Currently implementing research findings using **PyTorch**, aimed to achieve real-time transcription of EEG signals.
- Targeting sub **500-ms** algorithm latency, for applications including a **mind-controlled wheelchair & drone**.

Robotics Instructor | *Python, C*

Sep. 2022 – Aug. 2024

Code Ninjas Brampton SW

Brampton, Ontario, Canada

- Taught **software** and **mechanical** principles to **50+** students, while developing a customized robotics curriculum.
- Improved student success by **30%** through personalized instruction, adapting content to individual learning styles.
- Communicated with **10+** parents monthly to track progress and ensure **90%**.
- Promoted services to walk-in customers, contributing to a **15%** increase in client retention and enrollment.

PROJECTS

Forge3D - *TartanHacks - 3rd Place, 2025* | *Next.js, Three.js, Story Protocol SDK, Tailwind, Vercel, Git, Clerk*

- Built a decentralized 3D model marketplace platform using Next.js, employing **Story Protocol SDK** and **Clerk**
- Used Three.js for interactive 3D rendering of various file formats, ensuring smooth visualization and manipulation.
- Styled responsive interfaces with **TailwindCSS** and managed **metadata** using **TypeScript**.
- Pitched Product to **10+** judges, resulting in **3rd Place (Story Track)** at Carnegie Mellon's largest hackathon

Feedforward Neural Network | *C++, Git*

- Developed a neural network using standard libraries in C++ to solve the XOR problem, achieving **97% accuracy**.
- Trained the model with a **500 iterations**, applying **gradient descent** and **sigmoid activation**.

BehaViewer - *Newhacks 2024* | *Flask, Pandas, scikit-learn, MongoDB, React, Tailwind, Heroku, Git*

- Built a full-stack application with **React** and **Python**, analyzing customer data to **improve retention by 30%**.
- Reduced data pipeline runtime by **25%**, enabling scalable predictive analytics for loyalty metrics.
- Presented findings to TELUS executives, demonstrating **real-world impact** on customer retention strategies.

Robotic Exoskeleton Arm | *C, Lego EV3*

- Engineered a functional exoskeleton hand achieving **95%** accuracy in gripping, lifting, and precision tasks.
- Optimized motor outputs to control five individual fingers, enhancing joint-level dexterity by **40%**.
- Programmed motor motions in **RobotC** to lift objects weighing up to **1kg** with precise control.
- Programmed motion patterns for **ASL** signs, with potential for future speech-to-movement integration.