Akshay Mohan Gupta

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Education

Central Peel SS
Advanced Placement (AP)   *Brampton, Canada*

- Average: **99.88%**
- **1 of 90** across Peel enrolled in the Advanced Placement Program
- Relevent Courses: Computer Science, Computer Engineering, Functions, Physics, Chemistry

Experience

Head STEM Director   **Sep 2024 - Current**
Peel District School Board   *Brampton, ON*

- Organized school-wide STEM initiatives, attracting over **1000** participants, with events such as coding workshops.
- Utilized agile project management principles to ensure timely and efficient execution of workshops.
- Led a team of 8 members, collaborating with cross-functional teams to design curriculum and coordinate logistics.

Full Stack & AI Instructor   **Jun 2024 – Sep 2024**
Peel District School Board   *Peel, Canada*

- Mentored a cohort of over 30 students in **full-stack development** (MERN Stack) and TensorFlow **AI development** .
- Project-based lessons covered front-end (React.js), back-end (Node.js, Express), and database management (MongoDB).

Organizations   **Jun 2023 – Current**
Various   *Brampton, Canada*

- **INTERACT: President:** Social justice organization raising funds for urgent issues. I am in charge of **80+ students.**
- **SPARK: Corporate Relations Chair:** Organization dedicated to teaching youth about STEM. I lead a team with **5 other members** in fostering relationships with brands. My team raised over **$10,000** for a hackathon.
- **DECA: Director:** I am in charge of **60+ students** preparing them for a rigorous business event in Orlando.
- **ROTARY CLUB: 1 of 25** invited to British Columbia for an all-expenses paid summit. 1 on 1 conversations with the UBC Chancellor, BC Lieutenant Governor & Woman of the Year winning author.

Award Winning Projects

Won Hack MIT (1000 competitors) | *React, Vite, CanvasJS, Meta's Llama LLM, Convex + Clerk Backend, SunoAI*

- Developed MITI- an innovative music production platform with AI-powered suggestions and real-time collaboration
- Used React and CanvasJS for musical note placement along with features like drag, zoom, and keyboard shortcuts
- Prompt engineering of Llama to ensure its suggestions are automatically implemented into the user's song
- Created an authenticated sign-in system and synchronized backend user states to implement real-time collaboration
- Implemented a JSON to MIDI conversion algorithm and incorporated a music player for the user's song

Won HackThe6ix (400 competitors) | *Next.js, React, Google Gemini LLM, Yahoo Finance, Python, Flask*

- Created StockSee in the FinTech category to visually depict the correlation between real-world events and stock prices
- Used the Yahoo Finance API and Flask to display real-time stock data on the interactive graph (Chart.js + React)
- Developed a JavaScript **algorithm for selecting significant** high/low points and marking them green/red accordingly
- Implemented the Google Gemini LLM to correlate significant points with real-world company news and industry shifts

Stock Trading Bot | TensorFlow, Flask, React, Node.js, Python, TypeScript, Numpy, Pandas, SciKit Learn

- Used a **Deep Reinforcement Learning (Deep RL)** model to predict the estimated returns of a given stock.
- Created a virtual environment in which the model can either buy, sell, or hold a given stock averaging **6%** returns.
- Developed a Node.js with React frontend to display the trades, prices, etc in real-time with a Flask backend.

Skills

Programming: Python (ML, CV, OOP), C++, JavaScript, Next.js, MERN Stack, MySQL, C, Java, Linux, Bash, Arduino
Technical: Data Structures & Algorithms, Cloud Computing (AWS), Tensorflow, Skikit-Learn, OpenCV, Git, Jira, Agile
Competitions/Certificates: Waterloo Math Contests (top 15%), DECA Internationals, Udemy Tensorflow, Harvard CS50
Fun Facts: I play on the best volleyball team in Peel, I played hockey all my life, and I like politics!