# Akshay Mohan Gupta

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# Education

#### Central Peel SS

Advanced Placement (AP)

Brampton, Canada

- Average: 98%
- 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**

MITI 🗹 | 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

StockSee 🗹 | Next.js, React, Google Gemini LLM, Yahoo Finance, Python, Flask

- Created StockSee 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

QuantRL - 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 20% 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 (ROPSSAA Champions), play ice hockey, and enjoy investing!