

Samarth Bhatia

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TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript, TypeScript, HTML5, CSS3, R, Assembly, LaTeX, SQL.

Frameworks & Libraries: React, Next.js, Node.js, Django, Flask, FastAPI, Tailwind CSS, LangChain, Scikit-Learn, Pandas, PyTorch, TensorFlow, OpenCV, JavaFX, Radix UI, Librosa, Raylib.

Databases: SQL, Redis, MongoDB, Modal.

Development Tools: Git, GitHub, GitLab, Docker, Celery, Vercel, VS Code, IntelliJ, Anti-Gravity, Terminal Jupyter

PROJECTS

Synapse Sound | Neural Network Audio Visualizer

Brampton, Ontario

Python, PyTorch, Librosa, Next.js, Pandas, tensorflow

December 2026 - January 2026

- Created a Convolutional Neural Network (CNN) using **PyTorch** and **TensorFlow** to classify audio features, utilizing **Librosa** to extract MFCCs and chromagrams for high-fidelity feature mapping.
- Optimized data pipelines with **Pandas** and **NumPy** to streamline the transformation of raw .wav files into visual-ready datasets, enabling real-time frequency-to-visual synchronization.
- Engineered a low-latency bridge between the **Python ML** backend and a **Next.js** frontend, managing multi-dimensional **tensors** to ensure visual triggers responded to audio signals with zero perceptible lag.

Terminal X | Stock Market Dashboard | Fintech

Brampton, Ontario

TypeScript, Next.js, Financial APIs, Next.js

January 2026 - Present

- Designed an asynchronous backend using **Next.js API Routes** and **TypeScript** to fetch live market updates from **REST/WebSocket APIs**, implementing efficient data-polling to maintain a **100% responsive UI**.
- **Developed** a high-performance, terminal-inspired interface with **Tailwind CSS** and **Radix UI**, ensuring low-latency rendering of real-time asset price action and candlestick patterns.
- **Streamlined** complex state management of financial datasets by structuring custom hooks in **React**, prioritizing key performance indicators (KPIs) and live price movements for active day-trading workflows.

EXTRA CURRICULARS

Google Developer Student Club (GDSC)

Guelph, ON

Active Member

January 2026 – Present

- Collaborated with peer developers to explore emerging trends in AI and full-stack development through club-led study jams and hack sessions.
- Participated in community-led projects and technical seminars to stay current with industry-standard software engineering practices.

Team Software Developer - Corner Coach

Waterloo, Ontario

SpurHacks 2025 Hackathon

June 20th 2025- June 22nd 2025

- Developed an **AI-powered** boxing analysis platform that evaluates user-uploaded videos to detect form errors and generate instant, professional-grade performance feedback.
- Engineered a **Python (Flask)** and **MongoDB** backend to process video data, leveraging **OpenCV** and **MediaPipe** for real-time pose estimation and **Gemini AI** for biomechanical analysis.

EDUCATION

Bachelor of Computing, Computer Science (Co-op)

Guelph, Ontario

University of Guelph

Sep 2024 - Apr 2028

- **Relevant Courses:** Object-Oriented Programming, Microcomputers, Data Structures & Algorithms, Software Development, Operating Systems, Analysis of Algorithms, Discrete Math
- **GPA:** 4.0