

Jaynik Sheth

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EDUCATION

University of Toronto

Sep. 2024 – Apr. 2029

Honours Bachelor of Computer Science (A&S Internship Program)

Toronto, ON

- Program of Study: Computer Science Specialist & Statistics Minor
- Courses: Software Design, Intro to the Theory of Computation & Data Structures and Analysis

WORK EXPERIENCE

Software Engineer

Oct. 2025 – Present

UofT Trustworthy Machine Intelligence Team (TMI)

Toronto, ON

- Designing and implementing **multi-agent social simulations** in Python to model cooperation and fairness in small-world networks, analyzing emergent behaviors such as norm diffusion, polarization, and trust dynamics.
- Architecting a **scalable backend infrastructure** for LLM-driven simulations using FastAPI, asynchronous event loops, enabling efficient API communication, real-time analytics, and high-throughput data processing.

Founder & Lead Developer

Jun. 2025 – Present

Playgenix

Toronto, ON

- Building an AI-driven web platform that provides automated video analysis for gamers through real-time, frame-by-frame gameplay evaluation using **OpenCV and CNNs** for frame-level action recognition.
- Implementing user auth & session management with **FastAPI & Supabase** to secure user data & uploads.

Web Developer

May 2024 – Present

Dynamic Physiotherapy

Maple, ON

- Developing and maintaining a fully responsive healthcare clinic website using HTML, CSS, & JavaScript, improving **customer engagement and accessibility by 45%** through regular content updates and UI/UX optimizations.
- Ensured 99.9% uptime and fast load speeds by managing hosting, SSL, and DNS configurations via cPanel.
- Collaborating with staff to develop client-focused web solutions, enhancing the website for **2,000+ patients**.

Program Developer

Jun. 2023 – Aug. 2023

InspireTech

Parry Sound, ON

- Developed and deployed cloud-based programming and cybersecurity education software using Python, JavaScript, & Cisco Packet Tracer, expanding access to **1,000+ students & increasing platform engagement by 25%**.
- Collaborated with a team to design **20+ technical challenges** in coding, robotics, & cybersecurity for innovation competitions, enhancing participants' problem-solving accuracy and **competition participation by 40%**.

PROJECTS

SentimentScribe | *Java, Spring Boot, React, TypeScript, PostgreSQL, Flyway, Docker, AWS (EC2, S3)* Dec. 2025

- Developed a REST API using Java and Spring Boot, applying **clean architecture** to support diary entry management with **NLP-based** keyword analysis, and media recommendations from Spotify & TMDb APIs.
- Implemented PostgreSQL persistence with Flyway migrations, securing entries with **end-to-end encryption**.
- Built a React frontend featuring on-device encryption via the **Web Crypto API** to ensure client-side privacy.
- Implemented stateless **JWT authentication** with Spring Security, using access tokens and BCrypt password hashing to secure per-user REST endpoints, and enabled **offline-first client capabilities using IndexedDB**.
- Deployed the full-stack application to AWS, hosting the Docker-containerized backend on **EC2** and the React frontend on **S3** with CloudFront, while managing configuration via **AWS Systems Manager (SSM)**.

NBA Insights | *Python, Flask, NumPy, scikit-learn, Matplotlib, HTML/CSS/JS, RESTful APIs* Apr. 2025

- Designed and deployed an end-to-end **ML pipeline using scikit-learn** to cluster 450+ NBA players into statistical archetypes, optimizing Gaussian Mixture Models to achieve a 0.62 silhouette score after PCA.
- Created a modular Flask backend and responsive frontend to automate NBA API data ingestion with **in-memory caching**, enabling 10K+ calls/session, cutting redundant requests by 80%, and maintaining sub-200 ms latency.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, React.js, Node.js, C/C#, HTML/CSS, R

Libraries/Databases: FastAPI, Flask, Spring Boot, PyTorch, scikit-learn, OpenCV, PostgreSQL, Supabase

Developer Tools: Git/GitHub, Linux/WSL, Docker, AWS (EC2, S3, CloudFront), Vercel, Railway, VS Code