

Nirav Patel

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Education

Pennsylvania State University

Bachelor of Science, Software Engineering

(Pennsylvania, USA)

GPA: 4.0 | Expected 2027

Professional Experience

Software Engineer Intern (Returning Intern)

TrainingHub

Apr 2024 - Aug 2024, Apr 2025 - Aug 2025

Hybrid, Mississauga

- Co-architected and shipped a public-facing platform ([Link](#)), building Python REST APIs and integrating React components to support enrollment, authentication, and course workflows for 5,000+ learners across 60+ programs.
- Built backend integrations and data pipelines to ingest course metadata and live session logs, increasing analytics refresh cadence from weekly to daily for 500+ active users.
- Optimized SQL queries (BigQuery), API contracts, and validation layers, cutting dashboard load times by ~30% and enabling data-driven product changes that increased learner retention by 50%+.
- Deployed and operated AWS infrastructure using Terraform and CI/CD pipelines, supporting version-controlled environments and reliable production releases.

Founder

KidsTraining

Jul 2023 - Present

Remote

- Led a team of 6 instructors to teach 200+ youth (ages 12–18) through interactive classes, hands-on projects, innovative workshops, and impactful hackathons, maintaining 100% project completion and satisfaction rates.
- Authored 40+ developer-focused tutorials, technical guides, and code-along projects (Python, JavaScript, web dev, basic AI/ML), emphasizing clarity, reproducibility, and applied learning.
- Built lightweight automation tools (Python + REST APIs) to streamline feedback, track progress, and personalize learning.

Engineering Outreach Liaison

Toronto Metropolitan University

Feb 2024 - May 2025

Greater Toronto Area

- Delivered 350+ industry-backed STEM workshops (Hydro One partnership) to 5,000+ students across the GTA, improving engineering interest by 26.6%.
- Automated feedback processing and performed data analysis (Excel) to optimize workshop design, improving engagement and operational efficiency.

Skills

Languages: Python, JavaScript, TypeScript, SQL, HTML/CSS

Frameworks: FastAPI, Django, Flask, React, Express, REST APIs, WebSockets

Tools: Node.js, AWS (EC2, S3, IAM), Docker, Terraform, Redis, BigQuery, PostgreSQL, Git, GitHub Actions, Linux

Core Strengths: System design, API architecture, full-stack development, performance optimization, clear communication

Projects

• VENTURE (AI-Driven Music Explorer) | Django, FastAPI, Redis, React

[GitHub](#) [Demo](#)

Engineered an end-to-end AI music generator with FastAPI inference, Redis job queues, and a low-latency prompt-to-audio pipeline powering a real-time React interface.

• AWE (Autonomous Workflow Engine) | FastAPI (WebSockets), React, TypeScript, D3.js, Docker

[GitHub](#)

Developed a full-stack autonomous task-planning engine that transforms high-level goals into DAGs, providing live WebSocket updates and real-time task visualization.

• Network (Social Media Platform) | React, Node.js, SQL

[GitHub](#)

Designed scalable feed updates with optimized SQL, caching, and pagination to reduce DB load and improve performance.