

Anushka Punukollu

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EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Computer Science

Sept 2025 – Apr 2030

- Awards/Programs: Ted Rogers Future Leader Scholar, BMO200 Scholar, Loran Finalist, Jane Street WiSE

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, TypeScript, HTML/CSS

Frameworks: React, Node.js, Express.js, OpenCV, TensorFlow, PyTorch, NumPy, scikit-learn, Flask

Tools: Git, Colab, VS Code, Docker, Google Cloud, MongoDB, AWS, Firebase, Postman

EXPERIENCE

Software Engineering Intern

July 2025 – September 2025

Aviav International

- Engineered a video review portal for **300+ content creators** with **CRUD backend**, **MongoDB schema**, role-based access control, and versioning system to streamline collaboration workflows.
- Optimized video processing pipelines to **boost throughput by 30%** and reduce post-processing time by **50 hours/month** for multilingual content.
- Architected **5+ RESTful API endpoints** using NestJS and TypeScript with dependency injection and middleware patterns, supporting core platform and distribution channels.

Software Engineering Intern

July 2024 – August 2024

Nokia

- Migrated **10,000+ lines** of legacy code across **120+ files** in the Network Service Platform (NSP) from JavaScript to TypeScript, improving type safety, reducing load time, and catching errors while compiling.
- Refactored frontend dashboard using **React and Redux** for state management, adding NSP Indicators, OAM tests, and optimizing performance via **Chrome DevTools**.
- Presented the updated platform to senior executives as a part of the **Future Tech program**.

PROJECTS

FakeSeek (TechNova Winner) | *TypeScript, React, Node.js, Python, MongoDB, Gemini API, Beautiful Soup*

- Built a deepfake detection tool using **Google Gemini** to analyze image anomalies, lighting, and texture artifacts.
- Implemented **Auth0 OAuth**, **MongoDB** for secure storage, and styled responsive UI with **Tailwind CSS**.
- Automated impersonation monitoring using **Beautiful Soup** to scrape Google and alert users of deepfakes.

Go Neural Network | *Python, PyTorch, NumPy, Monte Carlo Tree Search*

- Designed and trained a **dual-head CNN** (policy/value) with residual blocks and **MCTS** in PyTorch for a Go-playing machine learning model using **self-play reinforcement learning**.
- Built Go engine with ko rule enforcement, capture logic, territory scoring, and **CLI-based** gameplay interface.

SucroSoil | *Python, Bayesian Regression, Material Science*

- Formulated a soil additive by **synthesizing hydrogels** from sugarcane bagasse to prevent farmland degradation.
- Secured **\$30K+** from Emergent Ventures, the 1517 Fund, and Ingenious+ to support R&D and testing in India.
- Developed a **Bayesian regression model**, 100+ experimental trials to predict water retention from hydrogel compositions, achieving 0.73 R^2 score. Patent pending.

LEADERSHIP

Board Member, Former CEO

November 2022 – Present

FUSE Society

- Scaled programs by **60% YoY**, delivering business literacy lessons to **6,000+ students** across **100+ schools**.
- Designed material on AI and blockchain; **secured partnerships with TD and Binance** for case competitions.

AWARDS

Canadian Informatics Workshop | **Bronze Medalist**

May 2025

- Placed in the top 10 women of 4,000+ contestants in the CCC, qualifying for Canadian EGOI team training camp.