

# Ayush Narayanaswamy

Vancouver, BC | Management Engineering, University of Waterloo

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## TECHNICAL SKILLS

**Languages:** Python, JavaScript, TypeScript, SQL, VBA, C++, C, RubyOnRails,

**Frameworks & Platforms:** React, Next.js, Node.js, Kotlin, Docker, Excel, Swift, PowerBI/Tableau, NumPy, pandas, Matplotlib, CSV pipelines

**ML+AI/Tools:** Git, GitHub, Jupyter, Supabase, Jira, Confluence, Vercel, Flutter, Figma, VS Code, SDKs, REST APIs, AI API Integration, Natural Language Processing, RAG Pipelines, Ollama, Model Training

**Certifications:** Technical Product Management, PowerBI Dashboards, ETL with Python & SQL, Docker Foundations Professional

## EDUCATION

### University of Waterloo

Waterloo, ON

*Bachelor of Applied Science, Management Engineering*

*Jul. 2025 – Jul. 2030*

- Elected **Academic Representative** for Management Engineering cohort representing **100+** students in Engineering Society academic meetings
- **Relevant Coursework:** MSE 240 (Data Structures and Algorithms); MSE 131 (Project Management/Crashing, Scrum, Process Optimization); MSE 100 (Excel VBA, Product & Project Management, Office Suite); MSE 121 (Python, data structures, algorithms, unit testing, Git/GitHub, Visual Studio)
- **Activities:** WatAI, University of Waterloo Data Science Club

## EXPERIENCE

### Product & Business Development Intern

2026

*LocalStudent (DMZ Backed Startup)*

*Toronto, ON*

- Managed and built **Python + SQL analytics pipelines** with over 40000 concurrent users processing **1,000+** marketplace listings and transactions daily
- Worked directly with the CEO and co-founders to design 10+ internal **product analytics dashboards** with **PowerBI** tracking listing conversion, user engagement, and retention cohorts for future road map prioritization
- Ran data-driven **product experiments on listing visibility and discovery algorithms**, improving marketplace engagement and transaction liquidity by 15%
- Communicated directly with stakeholders and analyzed in depth user feedback to implement and **ship 3 newly requested features** tailored toward **solving user pain points**

### Product & Business Development Specialist

Sep. 2025 – Present

*UW Formula Electric (UWFE)*

*Waterloo, ON*

- Secured and managed partnerships with **10+ industry sponsors**, coordinating outreach campaigns and sponsorship deliverables supporting Formula SAE vehicle development
- Produced marketing materials and outreach campaigns across digital platforms increasing team visibility and supporting recruitment of **100+ prospective members**
- Previously developed embedded firmware modules in **C/C++** supporting vehicle telemetry, applying knowledge of op-amp configurations and circuit analysis to ensure reliable data acquisition and signal integrity during vehicle testing

## PROJECTS

### Lucid (HackCanada 2026 Finalist) | Node.js, React, WebSockets, SQLite, Presage SmartSpectra SDK, Ollama (Qwen2.5)

2026

- Built **biometric-adaptive study platform** capturing heart rate, HRV, breathing rate, and blink signals from smartphone camera using Presage SmartSpectra SDK
- Streamed physiological signals to laptop via **WebSockets over WiFi**, or USB enabling real-time cognitive state detection during study sessions, improving efficiency by 75%
- Designed cognitive-state classification engine detecting **flow, fatigue, frustration, and disengagement** from biometric patterns
- Integrated local **Qwen2.5 LLM via Ollama** generating adaptive study recommendations and post-session learning analytics reports

### Lens | TypeScript, Chrome Extensions API, NLP

2026

- Developed **Chrome extension** evaluating article credibility using bias detection and citation-density heuristics
- Implemented real-time **DOM parsing and metadata extraction** analyzing long-form media sources during browsing
- Designed lightweight NLP scoring models ranking credibility signals across **1,000+ analyzed pages**

### ExcelFI | Excel, VBA, Financial Modeling

2025

- Built personal finance management system using **Excel VBA**, engineering robust data-entry workflows and automated categorization to support the structured tracking of **5,000+ financial records**
- Developed automated dashboards generating **10+ financial analytics visualizations** for spending trends and Investing projections with trained exponential growth formulae
- Implemented validated UserForms and structured data-entry workflows directly in **Excel** improving dataset integrity and financial tracking consistency