

Matthew Bodenstein

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Experience

Lead AI Software Engineer

Feb 2026 – Present

Maxim Mechanical Group Inc., Contract

Bradford, ON (Hybrid)

- Hired as lead engineer to design and build the company's field operations and safety management platform from scratch, owning all technical decisions while coordinating across multiple departments and stakeholders.
- Selected NeonDB for serverless Postgres-native vector storage deployed on Azure, keeping retrieval within existing infrastructure and eliminating dedicated vector DB overhead.
- Designed a Health & Safety AI module using Claude as the LLM backbone with state-machine workflows and human-in-the-loop review gates across 30+ stakeholders, cutting manual safety reporting cycles by 40%.
- Built RAG pipelines with structured prompt engineering to automate compliance checks across field sites and corporate offices, reducing review time per submission by over 60%.

Founder & Principal Engineer

Dec 2025 – Present

VUNO Digital Solutions, Sole Proprietor

Toronto, ON

- Run an independent consultancy building full-stack web apps, internal dashboards, and AI automation tools for multiple concurrent clients across industries.
- Replaced a client's paper-based form signing and inter-department email workflow with a full digital dashboard, digitized forms, and multi-stage approval system — eliminating manual document handling entirely.

Full-Stack Software Engineer

May 2025 – Feb 2026

CarGenie.co (AI Vehicle Recommendation Platform), Contract

Toronto, ON (Hybrid)

- Sole engineer on the full platform build: architected a GPT-4o-powered recommendation engine with TypeScript, Node.js, and PostgreSQL, growing to 1,000+ registered users with personalized multi-turn conversations.
- Built an admin dashboard with role-based auth, real-time analytics, and automated email campaigns via Mandrill and Mailchimp; owned technical roadmap execution alongside the founding team.

Research Assistant (Unity Developer)

Jun 2024 – Aug 2025

York University Sensorimotor Control Lab, Part-Time Contract

Toronto, ON (Remote)

- Built VR cognitive training applications used by 500+ research participants alongside full-time studies; co-designed calibration tooling with neuroscience researchers, cutting per-session setup time and reducing calibration errors across experiments.

Software Developer

Jan 2024 – Jan 2025

Ontario Government, Enterprise Architecture Office, Internship

Toronto, ON

- Built a PyTorch machine learning document similarity model to flag duplicate project requests above a configurable threshold, triggering cross-team review workflows and improving resolution accuracy by 45%.
- Developed Python AI automation pipelines for mental health support case routing, reducing manual triage work for case workers across the department.

Research Assistant (Software Developer)

Aug 2023 – Apr 2024

Lassonde School of Engineering, Dept. of Earth & Space Science, Part-Time

Toronto, ON (Remote)

- Refactored and optimised a Python simulation codebase for 2D/3D Mars wind models; derived and implemented atmospheric equations, analysed simulation data, authored technical reports, and produced visualizations adopted in peer-reviewed research.

Projects

Classroom Agent System | *React, Node.js, Express, OpenAI Assistants API, Supabase, AWS*

2025

- Multi-agent pipeline for automated assignment grading and feedback; architected agent orchestration, REST API, Supabase auth, and Composio email automation on AWS Elastic Beanstalk. Cuts instructor grading time by 70%.

AI Wellness Companion (OPS Hackathon) | *Python, Azure OpenAI, PowerApps, Whisper*

2024

- Led a 13-person team to design and ship an AI wellness assistant with voice input and TTS over a one-month OPS innovation sprint; recognized for accessibility impact across Ontario Public Service employees.

Education

Honours Bachelor of Science in Computer Science

Dec 2025

York University — Lassonde School of Engineering

Toronto, ON

Technical Skills

Languages: Python, TypeScript, JavaScript, Java, C, C++, C#, SQL, HTML5, CSS, PowerShell

AI / ML: Claude API, OpenAI API (GPT-4o, Assistants API), Azure OpenAI, PyTorch, machine learning, RAG pipelines, prompt engineering, human-in-the-loop systems

Frameworks & Libraries: React, Node.js, Express, Pandas, NumPy, Neo4j

Cloud & Platforms: Azure, AWS (Elastic Beanstalk), Supabase, NeonDB, PostgreSQL, PowerApps

Developer Tools: Git, Linux/UNIX, Postman, Maven, JUnit, CI/CD, JIRA

Practices: System Design, Full-Stack Delivery, RESTful API Design, Agile/Scrum, SOLID Principles, Stakeholder Management