Matthew Bodenstein

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EDUCATION

Honours Bachelor of Science in Computer Science   **December 2025**
York University - 3.7/4.0   *Toronto, ON*
Awards: Dean's List, Entrance Scholarship, Continuing Student Scholarship
Relevant Courses: OOP, OS, Software Design, Design and Analysis of Algorithms, Data Structures, Databases, Theory of Computation
Extracurricular Activities: Maccabi Team Canada Softball, Competitive Natural Bodybuilding (CPA), Online CPT, Hackathons, Game Dev

WORK EXPERIENCE

Full-Stack Software Engineer - Contractor   **May 2025 - August 2025**
CarGenie.co – AI-Powered Vehicle Recommendation Platform   *Toronto, ON*
- Architected and deployed a full-stack AI platform generating personalized vehicle recommendations via a multi-step survey and GPT-4o, using prompt engineering to enforce trim, budget, and North American market constraints.
- Engineered frontend using React 18, Vite, TypeScript, and a scalable backend with Node.js, PostgreSQL, Drizzle ORM, and OpenAI's API, supporting currency detection, modular prompts, and fault-tolerant workflows.
- Built a production-ready admin suite with Passport.js authentication, email automation (Mandrill, Mailchimp), analytics tracking (Facebook Pixel), Google Sheets sync, and a monetized concierge workflow.

Research Assistant - Unity Software Developer   **June 2024 – August 2025**
York University Sensorimotor Control Lab   *Toronto, ON*
- Developed Unity VR cognitive training tools, used by 500+ participants in academic studies and clinical research.
- Integrated multimodal feedback (visual, auditory, haptic) to enhance sensorimotor engagement and improve measured cognitive and motor performance by 25%.
- Optimized input handling and feedback calibration through testing with teams of researchers and engineers.

Software Developer Intern   **January 2024 – January 2025**
Ontario Government, Enterprise Architecture Office   *Toronto, ON*
- Developed an AI automation system in Python for mental health support, reducing manual processing time by 30%.
- Implemented SharePoint automation with AI/ML to analyze document similarity, increased 45% in case resolutions.
- Designed and built a mixed-reality training system to enhance interactive employee training using SharePoint Spaces.

Research Assistant - Software Developer   **August 2023 – April 2024**
Lassonde, Dept. of Earth & Space Science & Engineering   *Toronto, ON*
- Engineered high-resolution 2D and 3D Mars wind simulations in Python, improving atmospheric model accuracy by 20% and reducing runtime by 40% through algorithmic optimization.
- Built data visualization tools to support clearer interpretation of simulation results used in lab publications.

IT Technician Intern   **January 2023 – April 2023**
Litens Automotive Partnership   *Vaughan, ON*
- Automated system tasks with PowerShell, resolved server/network issues, and implemented cross-platform configurations, reducing technical resolution time by 50% and boosting efficiency by 67%.

PROJECTS

Mount & Mail - Meta Game Jam — Unity, C#, Fusion Networking, Meta Quest
- Collaborated with **Squido Studio** to develop a VR climbing and delivery game within a 1-month game jam.
- **Published on the Meta Store**, optimizing performance and visuals for headset launch standards.

Interactive Black Hole Simulation — ML5.js, p5.js, JavaScript
- Developed a real-time black hole simulation integrating **ML5.js Handpose** for dynamic hand-tracking interaction.
- Implemented gravitational lensing and relativistic light warping using particle systems and Perlin noise for realism.

AI Wellness Companion - OPS Phenomenal Hackathon — Python, Azure OpenAI, PowerApps, Whisper OpenAI
- **Led hackathon** project using **PowerApps**, **Azure OpenAI**, and **Whisper** for employee wellness.
- Implemented **Python Text-to-Speech** (TTS), enhancing accessibility and user experience in the application.

The Six Degrees of Kevin Bacon — Java, Maven, Neo4j, Robot Framework, Git, Postman
- Developed **REST API** endpoints using **Neo4j** and **JSON** formatting, enabling shortest path queries between actors.
- Created **Robot Framework** test scripts and Postman tests, reducing bug detection time by 20% ensuring API reliability.

TECHNICAL SKILLS

- **Languages**: Python, Java, C, C++, C#, JavaScript, HTML5, CSS, MATLAB, PowerShell, Kotlin, Dart, SQL, PostgreSQL
- **Frameworks**: React, Flutter, Spring Boot, Neo4j, Robot Framework, PyTorch, Pandas, NumPy, Matplotlib, p5/ml5.js
- **Tools**: Azure OpenAI, PowerApps, Linux/UNIX, Node.js, Git, Maven, JUnit, Postman, Tkinter, Unity, Figma, Arduino
- **Agile Methodology**: Scrum process, Iterative Software Design, SOLID Principles, Design Patterns, JIRA Tracking, CI/CD