Manav Joshi

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EDUCATION

University of Alberta   Expected Graduation December. 2026
BSc in Electrical Engineering
- Relevant Coursework: TCP/IP networking, Machine Learning, Multimedia Signal Processing, Linux Fundamentals

TECHNICAL EXPERIENCE

MLH Production Engineering Fellow   June 2025 - Sep. 2025
Meta   *Montréal, Canada*
- Developed and deployed scalable full-stack applications, implementing CI/CD pipelines, containerization, and cloud-based services to ensure reliability and maintainability.
- Practiced production engineering principles, conducting incident response simulations, improving automation.
- Monitored and improved service performance across distributed systems leveraging observability tools and cloud infrastructure, ensuring resilience and scalability using Prometheus, Grafana, and Splunk.
- Built full-stack web apps using Flask & JavaScript, delivering production-ready features with direct user impact.

Operational Technology Security Intern   May 2024 - Aug. 2025
Canadian National Railway   *Montréal, Canada*
- Automated system for CyberSecurity events using Python, reducing **response time to incidents by 81%**.
- Created an internal brake testing prototype running on a Python Back-End to reduce train air brake **testing overhead by 62%**.
- Coded Python scripts to aggregate reports for SWIFT financial system, saving **312 person-hours** annually.

Full Stack Developer Intern   Dec. 2023 - Feb. 2024
Jam   *Edmonton, Canada*
- Developed REST API for back-end using Express.js, JavaScript, and TypeScript, user data with MongoDB.
- Developed front-end web application using Next.js, JavaScript, TypeScript, Tailwinds CSS, and HTML.

Software Developer   Mar. 2023 - Sep. 2023
Gamefam   *Edmonton, Canada*
- Developed game mechanics for multi-platform games using Lua, generating **21.2 million unique game plays**.
- Reduced game **memory usage by 36%** using Lua, leading to **17% increased player retention**.

EXTRA-CURRICULAR LEADERSHIP EXPERIENCE

Vice President   Apr. 2023 - Present
Electrical Engineering Club   *Edmonton, Canada*
- **Raised upwards of $20,000** in sponsorships for Alberta's largest Collegiate Hardware Hackathon, E2-C2.
- Organized collaborative events with **15 companies** across Canada to develop student work readiness for industry.

TECHNICAL PROJECTS

UtiliSee | *React, Node.js/Express, Firebase, Hardware Integration*   2022 - 2025
- Built a real-time utility tracking system combining embedded sensors with a full-stack web platform.
- Architected backend data ingestion pipeline, optimizing read/write operations in Firebase for real-time updates.
- Deployed in production on a Linux CentOS VPS, serving REST API and front-end.

SafetyVision | *Flask, React, Python, JavaScript, HTML, CSS, Firebase, Twilio*   Jan. 2024
- Won 1st place in HackEd, Alberta's largest hackathon.
- Developed a full-stack web application with Flask & Python serving a REST API and React as the frontend.
- Implemented YOLOv5 image recognition AI model to detect and capture images of weapons on cameras.
- Integrated Firebase database to store and access user data with password salting for user auth & security logging.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, SQL, JavaScript, HTML, CSS, MATLAB, VHDL, ARM Assembly
Frameworks/Libraries: scikit-learn, PySpark, Pandas, NumPy, PyTorch, Keras, TensorFlow, React, Express.js, Vue.js
Developer Tools: Git, Docker, Firebase, MongoDB, Node.js, Power BI
APIs: OpenAI, ChatGPT, Twilio, X, Generative AI, Apple Maps, Google Maps