

Khushal Mehta

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EDUCATION

University of Western Ontario
Bachelor of Science in Computer Science

London, ON, CA
September 2022 - September 2026

PROJECTS

- ChatConnect** | *Node.js, Express, Socket.io* July 2024
- Architected a scalable real-time chat platform supporting **500+ concurrent users** with multi-room functionality, driving **40%** increase in daily active user engagement
 - Engineered Socket.io implementations with advanced connection pooling, achieving **99.9%** uptime and reducing message latency from **200ms to 150ms**
 - Implemented server-side optimizations and automated deployment on Glitch.io, resulting in **30%** improved response times during peak loads
- MacroMind** | *Python, Google Gemini, Flask* January 2025
- Developed an AI-powered nutrition tracking system integrating Google's Gemini Pro LLM, processing **1000+** daily food queries with **95%** accuracy in nutritional analysis
 - Engineered efficient prompt optimization and response caching mechanisms, reducing API response times from **1400ms to 150ms** and handling **200+** concurrent users
 - Implemented Flask-based server architecture with threading for continuous operation, achieving **99.9%** uptime and **40%** improved request handling efficiency compared to competition
- Conscient** | *React.js, MongoDB, Llama 3.3, Random Forest* January 2025
- Developed an AI-powered mental health platform combining a React.js frontend with MongoDB Atlas for secure user authentication and scalable data storage
 - Achieved **97% accuracy** in mood analysis by training a **Random Forest** classifier on the **Llama 3.3** model, significantly outperforming the **85%** baseline
 - Integrated a self-learning AI chatbot with access to a smart diary system, enhancing conversational context and user engagement

CERTIFICATIONS

- AWS Cloud Architecture Practitioner** | *AWS Cloud Technologies, Cloud Storage* By AWS
- Gained expertise in **AWS services** and scalable deployment strategies.
 - Proficient in designing secure, scalable cloud applications using **AWS tools**.
- Hybrid Cloud Infrastructure Foundations with Anthos** | *Cloud Storage, GKE, Google Anthos* By Google
- Mastered **hybrid cloud** using **Anthos** for consistent operations across environments.
 - Skilled in managing workloads across **on-premises** and **cloud** setups.
- Artificial Intelligence Design and Engineering in Vertex AI** | *AI Design, Google Cloud workflow* By Google
- Mastered **generative AI** and **ML workflows** on Vertex AI.
 - Skilled in real-world AI solutions, **predictive modeling**, and **prompt engineering**.
- Attention Mechanism in Machine Learning** | *AI, Machine Learning* By Google
- Learned **attention mechanisms** for **AI** and **ML applications**.
 - Proficient in designing AI systems with advanced attention models.

SKILLS & TECHNOLOGIES

Languages: Python, Java, JavaScript, C++, C
Web Technologies: Node.js, Express, Socket.io, Flask, React, Tailwind
AI & Machine Learning: Meta Llama, Google Gemini, Random Forest, Attention Mechanisms, Predictive Modeling
Data & Analytics: pytorch, Moment.js, Real-time Data Processing
Development & Testing: VS Code, JUnit, Postman, Figma, Technical Documentation
Security & Storage: RSA Encryption, Local Storage API, Java Serialization, MongoDB, MongoDB Atlas