Jonathan Mehmannavaz

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Education

Concordia University Montreal, QC
Bachelor of Engineering in Computer Engineering (Co-op) *Sep 2022 – Apr 2026*

- Member of the Institute for Co-operative Education
- Relevant Coursework: Object-Oriented Programming, Digital System Design, Embedded Systems

Technical Skills

Languages: C/C++, Python, Java, JavaScript, SQL (PostgreSQL), HTML/CSS, Swift, Bash, VHDL, Assembly
Frameworks/Libraries: TensorFlow, Keras, Scikit-learn, Node.js, Express.js, SwiftUI, Bootstrap, React
Tools/Platforms: Git, Docker, Google Cloud, Power BI, LaTeX, MATLAB, Arduino, FPGA, ARM, PLC, Altium Designer
Certifications: TensorFlow for Deep Learning, Power BI, iOS Development (Udemy)

Experience

Co-op Supervisor Sep 2023 – Dec 2023
Pratt & Whitney Canada *St-Hubert, QC*

- Led change management initiatives across manufacturing department, reducing non-quality defects by implementing systematic process improvements and employee training programs
- Deployed RF scanning system and KPI monitoring dashboard, increasing operational efficiency by 15% through real-time tracking and data-driven decision making
- Managed team of 12 unionized employees in fast-paced aerospace manufacturing environment, coordinating daily operations, task assignments, and cross-functional collaboration

Projects

Peer Assessment Platform | *Node.js, Express.js, PostgreSQL, Bootstrap, Agile* Sep 2024 – Dec 2024

- Architected and deployed full-stack web application enabling peer evaluations for 100+ students, implementing secure authentication, role-based access control, and real-time analytics dashboard
- Led 7-person development team through 4 Agile sprints, managing backlog prioritization, sprint planning, and continuous integration/deployment using Git workflows
- Designed scalable PostgreSQL database schema with normalized tables, optimized queries reducing page load times by 40%

Autonomous Hovercraft System | *Arduino, C++, MATLAB, SolidWorks, Embedded Systems* Sep 2024 – Dec 2024

- Engineered autonomous navigation system using ultrasonic sensors, PID control algorithms, and real-time obstacle avoidance, achieving 90% success rate in competition trials
- Performed CFD analysis in SolidWorks to optimize lift fan design, increasing thrust efficiency by 25% while reducing power consumption
- Developed embedded C++ firmware with interrupt-driven sensor fusion and motor control, processing 50+ sensor readings per second

Deep Learning Projects | *TensorFlow, Keras, Scikit-learn, Python, Google Colab* Dec 2024 – Jan 2025

- Built and trained 5+ neural network architectures for regression, classification, and time series forecasting, achieving 92% accuracy on computer vision tasks using CNN models
- Implemented NLP sentiment analysis model using RNN/LSTM networks, processing 10,000+ text samples with 88% accuracy
- Applied transfer learning with pre-trained models (ResNet, BERT) to accelerate training and improve model performance

Leadership & Activities

Regional RSEQ Champion – Football Team "Les Sphinx" (2017-2019): Gold and silver medal winner

International Solidarity Trip – Guatemala (2019): Built infrastructure and organized activities for underserved communities