

SUKHMEET SINGH HORA, EIT

Full Stack Developer · Software Engineer · IoT & Embedded Systems
431-388-7835 · maherhora468@gmail.com · [LinkedIn](#) · [Portfolio](#) · [GitHub](#)

PROFESSIONAL SUMMARY

Computer Engineer (BSc, University of Manitoba, 2025) with 3+ years of industry experience designing and shipping end-to-end software systems. Builds across the full stack - React, Node.js, Express, MongoDB, and SQL on the web side; C/C++, Python, MQTT, and AWS IoT at the systems level. At Indus Automation, independently architected and deployed production web applications with React–Node.js–Express backends, Azure AD authentication, Microsoft Graph API integrations, automated PDF pipelines, and real-time data dashboards. Co-op experience at New Flyer and a six-person MERN-stack capstone project add depth in agile delivery, CI/CD, load testing, and cross-functional collaboration. Comfortable owning a feature from schema design and API contract through to UI and deployment - and equally comfortable working close to hardware when the system calls for it.

TECHNICAL SKILLS

Languages	JavaScript / TypeScript, Python, C, C++, SQL, VBA, HTML/CSS, Dart, PHP, Auto LISP
Frontend	React, TypeScript, HTML5, CSS3, Responsive Design, REST API, MSAL / OAuth 2.0
Backend / APIs	Node.js, Express.js, REST API design, Custom Connectors, Microsoft Graph API, Office Scripts
Databases	MongoDB, SQL Server, PostgreSQL, SharePoint Lists, WinCC OLE DB, Redis (familiar)
Cloud & DevOps	AWS IoT Core, Azure AD / Entra ID, Docker, CI/CD pipelines, Git, GitHub Actions, Node-RED
Embedded / IoT	C / C++, STM32, ESP32, Siemens S7-1200/1500 PLC, MQTT, BLE, Wi-Fi Telemetry, TIA Portal
Tools & Platforms	Power Platform (Apps, Automate, BI), SharePoint Online, AutoCAD Electrical, MATLAB, JIRA
Testing / Delivery	Docker, JMeter, Unit / Integration / Load Testing, Agile / Scrum, Technical Documentation

PROFESSIONAL EXPERIENCE

Software Developer / IT Support | Indus Automation

May 2025 – Present

- Architected and deployed a **secure real-time web application** (React–Node.js–Express) for internal project management, integrating Microsoft Graph API, Power Automate, and Office Scripts to automate data extraction from SharePoint Excel sources. Implemented **Azure AD / MSAL authentication** with role-based access control, delivering three distinct dashboard views - Production, Resource Capacity (Gantt), and Design Drafting - that replaced manual reporting processes and improved project visibility and deadline tracking.
- Designed and deployed two **production Power Apps (Canvas)** for field technicians: an offline and online-capable Hazard Assessment Form with dynamic lists, risk scoring and signatures with auto-generated formatted signed PDFs routed via Power Automate, and a 6-step Service Record wizard tracking multiple work days auto calculating regular or overtime or double hours involving multi-stage approval process, automated email distribution, and SharePoint record archiving - replacing a manual paper-based process.
- Engineered a **full-stack SQL reporting tool** interfacing directly with OPC Server and SQL Server via WinCC OLE DB Provider and VT Scada Reporting Engine querying live SCADA tag and alarm history data to auto-generate structured compliance reports - eliminating manual extraction from industrial control systems.
- Spearheading development and maintenance of an **automated project management excel template** using macros, vba scripts, office scripts and power automate- including feature upgrades, performance optimization, and backend data handling - alongside a pdf automation engine that generates merged documents with auto-built table of contents, internal hyperlinks, bookmarks, and optimized cut-sheet and submittal generators.
- Developed and maintained a **cross-platform IoT smartphone application** (Flutter + Dart) for real-time remote monitoring and control of Siemens S7-1200/1500 PLCs. Designed the backend architecture for user content management and analytics, leveraging **AWS IoT Core + MQTT** via Siemens IoT2050 and Node-RED; implemented RBAC, live telemetry dashboards, graphical trend analysis, and push / email / SMS alert pipelines.
- **Designing full-stack software solutions** that interface with SQL-based databases, enabling automated data entry, reporting workflows, and user access controls aligned with enterprise security requirements.
- Collaborating cross-functionally with engineers and managers to **identify automation inefficiencies** and implement software-based solutions that improve process visibility and operational performance.
- Supporting migration of legacy on-premises infrastructure to **cloud-based environments**, contributing to system architecture planning, server configuration, and deployment automation; providing internal IT support including diagnostics, network configuration, and software troubleshooting across engineering and operations teams.

Engineering Project Coordinator - Co-op | **New Flyer**

May 2024 – April 2025

- Developed an **automated budget forecasting application** using VBA, Power BI, and Power Query integrating actuals and projections for real-time monthly and annual expenditure tracking - used by engineering leadership for financial planning.
- **Automated capacity planning and post-mortem reporting** by building a dynamic Excel template with VBA, Macros, and burndown analysis charts, connected live to SharePoint - reducing weekly reporting overhead significantly.
- Designed and implemented an **automated Bill of Materials (BoM) management system** using VBA and Macros, handling part updates, batch notifications, and installation tracking across design support and commissioning teams.
- Gained hardware/software fundamentals in **CAN protocol, J1939, and CAN FD** for advanced vehicle networks in a transit bus engineering environment.

Engineering Aide - Co-op | **Indus Automation**

Sept 2022 – December 2023

- Designed and deployed a **secure cross-platform IoT mobile application** for real-time remote monitoring and control of Siemens PLCs at pump/lift stations - built on AWS IoT Core and MQTT, with Node-RED on Siemens IoT2050 as the edge broker. Implemented role-based access control, dynamic setpoint control, live graphical trend analysis, and push/email/SMS alert delivery. The system replaced manual on-site checks across multiple pump stations.
- Built a **SharePoint-integrated project management template** in Excel (VBA, Macros, Power Query) synchronizing with Outlook calendar events to track purchase order deadlines cross-departmentally - achieving an **8× efficiency improvement** in design and drafting workflows through automated status formatting, cell locking, and backup pipelines.
- Automated Excel take-off sheets and integrated PLC I/O data into AutoCAD Electrical using VBA and Macros, optimizing component insertion with Assembly Codes, time tracking, and service record generation.

Student Web Developer / Analyst | **Manitoba Municipal Relations**

Jan 2022 – May 2022

- Developed **SharePoint collaboration sites** and HTML pages for content interaction; executed SQL extracts, supervised batch jobs, and authored test scripts and system documentation for the FDM applications.

PROJECTS

CareerSphere - Full-Stack Career Platform - *MERN Stack · Docker · CI/CD · GitHub · JMeter · REST APIs*

- **Team of 6.** Engineered a full-stack career platform on the MERN stack connecting job seekers and employers. Built and integrated: AI-driven job recommendation engine, real-time WebSocket messaging, employer quiz system, interview scheduling, and discussion forums. Implemented CI/CD pipelines, containerized the application with Docker, and performed integration, regression, and load testing - **verified stable under 250 concurrent users** with JMeter.

IoT River Depth Monitoring System - Capstone - *AWS IoT · MQTT · Flutter · GPS · BLE · ML · Google Maps API*

- **Team of 6.** Sensor-driven embedded system enabling boaters to conduct real-time bathymetric surveys. Sonar + GPS data streamed via BLE/Wi-Fi to a Flutter mobile app with Google Maps visualization, safe-route navigation, and ML-driven hazard detection. Telemetry pipeline deployed to **AWS IoT Core**; firmware written in C for the embedded sensor node.

Real-Time Operational Dashboards - *React · Node.js · Express · Microsoft Graph API · Azure AD / MSAL · SharePoint · Office Scripts*

- Independently architected three role-based internal dashboards (Production, Resource Capacity Gantt, Design Drafting) with Azure AD / Entra ID authentication, automated SharePoint data extraction via Graph API and Office Scripts, and live deadline tracking - deployed to production at Indus Automation.

PLC IoT Remote Application - *Flutter · AWS IoT Core · MQTT · Siemens S7-1200/1500 · Node-RED · iOS / Android*

- Designed and shipped a cross-platform mobile application (iOS + Android) for real-time remote control of industrial PLC systems. Full backend including user management, analytics, RBAC, and telemetry pipelines on AWS IoT Core.

Broom Buddy - Embedded Assistive Device - *ESP32 · ESP-NOW · C/C++ · 12-bit ADC · Real-time Wireless*

- Feedback-based embedded control system for deaf curlers. Designed **peer-to-peer ESP-NOW wireless communication** (no router required) between a handheld controller and an LED ring on the broom. Engineered the low-power signal interpretation and device actuation logic end-to-end in C/C++.

EDUCATION & CERTIFICATIONS

Bachelor of Science, Computer Engineering (Co-op / IIP)

Graduated May 2025

University of Manitoba - Runner-Up, Co-op/IIP Student of the Year (Faculty of Engineering)

- **Full-Stack JavaScript Development: MongoDB, Node.js & React** (2025)
- **Foundations of User Experience (UX) Design** - Google (2024)
- **Project Management Foundations** (2024)
- **Tech Stewardship Practice Program** (2023)