

SUKHMEET SINGH HORA, EIT

Full Stack Developer · Software Engineer · IoT & Embedded Systems
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PROFESSIONAL SUMMARY

Computer Engineer (BSc, University of Manitoba, 2025) with 1 year of professional software development experience since graduation, building on 16 months of full-time engineering co-op experience. 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, Power Apps, automation tools, IoT platforms, and industrial remote-access VPN solutions as the sole software developer. A six-person MERN-stack capstone project and prior co-op terms 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, deployment, and documentation - 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 APIs, MSAL / OAuth 2.0

Backend / APIs: Node.js, Express.js, REST API design, Microsoft Graph API, Office Scripts, Custom Connectors

Databases: MongoDB, SQL Server, PostgreSQL, MySQL, SharePoint Lists, WinCC OLE DB

Cloud & DevOps: AWS IoT Core, Azure AD / Entra ID, Docker, CI/CD, Git, GitHub Actions, Node-RED

Embedded / IoT: C / C++, STM32, ESP32, Siemens S7-1200/1500 PLC, MQTT, BLE, OPC UA, TIA Portal

Industrial Networking: Exor Micro Edge, Corvina Cloud VPN, Siemens SCALANCE S615, SINEMA Remote Connect

Automation: Power Platform (Apps, Automate, BI), SharePoint Online, VBA Macros, Office Scripts, PowerShell

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 production data pipeline integrating Microsoft Graph API and Office Scripts to automate scheduled extraction of project management data from SharePoint Excel sources into a React-Node.js-Express web application - delivering three role-based dashboard views (Production, Resource Capacity Gantt, Design Drafting) with Azure AD / MSAL authentication and real-time deadline tracking, replacing manual reporting processes.
- Engineered an end-to-end timesheet automation system: a Power Apps canvas application for structured hour submission (regular/overtime/holiday/sick, mileage, banked-time FIFO logic, keyboard-accessible entry) feeds Power Automate flows that generate per-employee and master Excel files aligned to QuickBooks naming conventions for automated import into time tracking, payroll, and job-costing - including a pay-in-arrears workflow validated with the company CPA and automated submission-reminder notifications.
- Built and deployed two production Power Apps (Canvas) as structured data collection and workflow automation systems for field operations: an offline-capable Hazard Assessment Form with dynamic risk scoring, hazard classification, signature capture, and automated signed PDF generation routed via Power Automate to SharePoint record archiving; and a 6-step Service Record wizard capturing multi-day work data with auto-calculated regular, overtime, and double hours, driving a multi-stage approval workflow with automated email distribution and SharePoint data archiving - replacing paper-based processes with reliable, queryable digital records.
- Engineered an industrial remote-access VPN solution using an Exor Micro Edge gateway and Corvina Cloud - configuring WAN/LAN/TAP interfaces, activating the cloud VPN gateway, and defining single-IP and CIDR endpoints to control device reachability; built application profiles (RDP, VNC, SSH, HTTPS) mapped to endpoints for granular access control, validated TAP-tunnel routing to PLCs/HMIs/SCADA from desktop and mobile, and authored a complete engineering guide including a CIDR allocation reference and an RDP root-cause troubleshooting procedure. Also evaluated Siemens SCALANCE S615 with SINEMA Remote Connect as an alternative remote-access path. Currently evaluating protocol conversion using JMobile, Email and SMS notifications and IoT remote control, dashboard and reporting using web HMI or custom app.
- Engineered a proof-of-concept reporting system interfacing with OPC Server and SQL Server via WinCC OLE DB Provider, OPC UA, and VT Scada SQL Logger - extracting live SCADA tag and alarm history, creating structured SQL tables via script, and generating scheduled reports; full production software to replace the legacy reporter is in active development. Also automated FAT/SAT IO check sheet generation for Siemens and Allen-Bradley PLCs via VBA for signal locations, rack/slot assignments, I/O grouping, address generation and configurable manual entry from AutoCAD Electrical exports.
- Developed a PDF Cut Sheet Generator and submittal automation system - an Excel VBA macro searches a file-server database and collects component cut sheets matched by part number and naming pattern, then a Python application merges the PDFs, auto-generates a linked 4-column table of contents (Number, Part No., Manufacturer, Description) with internal hyperlinks and bookmarks, and packages the tool as a standalone Windows executable; deployed with staff training and SharePoint documentation.
- Architected the company-wide project management (PM Sheet) automation platform on Excel, VBA, Office Scripts, and Power Automate - custom file folder and outlook folder creation, report-generation macros, automated Teams notifications,

fee proposal automation quotation/RFQ tracking flows, month-based Gantt resource planning, and PowerShell job-folder automation; also built a 5,500+ part inventory management application with QuickBooks sync and a smart cross-field search engine.

- Built and launched two production WordPress websites (custom forms, RESEND email integration, SEO, and a Power Automate-driven quote estimator) and administered Microsoft 365 as internal IT lead (Azure AD, MFA, licensing, SharePoint migration); collaborated cross-functionally with engineering, operations, and finance teams, led an organization-wide AI training session, and supported on-premises to cloud migration.

Engineering Project Coordinator - Co-op | New Flyer Industries

May 2024 - April 2025

- Developed an automated budget forecasting application using Power BI, Power Query, and VBA - integrating actuals and forward projections into a unified financial data model for real-time expenditure tracking, used directly by engineering leadership for financial planning.
- Built a dynamic capacity planning reporting system using Excel, VBA, Macros, and burndown analysis charts connected live to SharePoint - automating weekly reporting workflows and significantly reducing manual overhead.
- Designed an automated Bill of Materials (BoM) management system using VBA and Macros - handling structured part updates, batch change notifications, and installation tracking across design and commissioning teams.
- Developed working knowledge of CAN protocol, J1939, and CAN FD communication standards for advanced vehicle networks in a regulated transit bus engineering environment.

Engineering Aide - Co-op | Indus Automation

Sept 2022 - December 2023

- Designed, developed, and deployed an inhouse proof of concept secure cross-platform IoT monitoring application (Flutter + Dart) for real-time remote monitoring and control of Siemens S7-1200/1500 PLCs at pump/lift stations - architected the full backend on AWS IoT Core + MQTT via Siemens IoT2050 and Node-RED as the edge broker; implemented RBAC, dynamic setpoint control, live trend analysis, telemetry dashboards, and automated push/email/SMS alert pipelines, replacing manual on-site checks across multiple field deployments.
- 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 8x efficiency improvement through automated formatting, validation, cell locking, and backup pipelines.
- Automated Excel take-off sheets and integrated PLC I/O data into AutoCAD Electrical using VBA and Macros - enabling automated component insertion, time tracking, and service record generation.

Student Web Developer / Analyst | Manitoba Municipal Relations

Jan 2022 - May 2022

- Executed SQL extracts against government FDM application databases, supervised batch jobs, and authored test scripts and system documentation. Developed SharePoint collaboration sites and HTML interfaces for the branch.

KEY PROJECTS

- Team of 6. Engineered a full-stack platform with real-time WebSocket messaging, interview scheduling, and discussion forums. Implemented CI/CD pipelines via GitHub Actions, containerized with Docker, performed integration, regression, and load testing - verified stable under 250 concurrent users with JMeter. *CareerSphere - Full-Stack Career Platform - MERN (MongoDB, Express, React, Node.js) · Docker · CI/CD · GitHub Actions · JMeter:*
- Team of 6. Sensor-driven embedded system for real-time bathymetric surveys - sonar and GPS data streamed from embedded C firmware via BLE/Wi-Fi, ingested into AWS IoT Core and DynamoDB via Amplify, visualized in a Flutter mobile app with ML-driven hazard detection and Google Maps safe-route navigation. *IoT River Depth Monitoring - Capstone - AWS IoT Core · MQTT · Flutter · DynamoDB · AWS Amplify · ML · GPS · BLE:*
- Cross-platform mobile application for real-time remote monitoring and control of industrial PLC systems across pump/lift station field deployments. Full backend data architecture on AWS IoT Core - RBAC, analytics, live telemetry dashboards, trend analysis, and automated alert pipelines. *PLC IoT Remote Application - Flutter · AWS IoT Core · MQTT · Siemens S7-1200/1500 · Node-RED · iOS / Android:*
- Fully normalized relational database (3NF) modelling music catalogues - foreign keys, referential integrity, cascades, complex multi-table JOINS, correlated subqueries, and GROUP BY aggregates. JavaScript CLI for full CRUD, playlist management, and structured reporting. *MusicOSet - Relational Database Application - MySQL · JavaScript CLI · Relational Modeling*
- Feedback-based embedded control system for deaf curlers. Engineered peer-to-peer ESP-NOW wireless communication (no router required) between a handheld controller and an LED ring - designed low-power signal interpretation and device actuation logic end-to-end in C/C++. *Broom Buddy - Embedded Assistive Device - ESP32 · ESP-NOW · C/C++ · 12-bit ADC:*

EDUCATION & CERTIFICATIONS

Bachelor of Science, Computer Engineering (Co-op / IIP) - University of Manitoba, May 2025

Runner-Up, Co-op/IIP Student of the Year - Faculty of Engineering

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