Nihal Inel

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EDUCATION

McMaster University
Sept 2022 – April 2028

Bachelor of Engineering in Computer Engineering, Minor in Business Management — *Hamilton, ON*

- **Relevant Coursework:** Data Structures and Algorithms (C++), Prob & Stat, Principles of Programming (C), Linear Algebra, Software Development (Python & Simulink), Project Development & Management

SKILLS

Languages: C/C++, Python, JavaScript, TypeScript, Java, C#, SQL, CSS, SCSS, Verilog, XML, ZPL
Developer Tools: React.js, Node.js, .NET, Git/GitHub, Azure DevOps, Docker, Microsoft SQL, MongoDB, Firebase

WORK EXPERIENCE

ATS Corporation
May 2025 – August 2025

Software Developer Co-op — *Cambridge, ON*

- Developed front-end features for the Illuminate Intelligent Manufacturing Solution using **React** and **TypeScript**, improving the user experience and responsiveness of the interface for industrial operators.
- Integrated C# backend services with APIs and **Microsoft SQL Server** databases to enable seamless real-time industrial data acquisition and analysis across distributed systems.
- Delivered production-ready prototypes and iterative feature updates across 8 Agile sprints using **Azure DevOps** and **Docker**, strengthening cross-functional collaboration and ensuring on-time releases.

Brock Solutions
Sept 2024 – April 2025

Software Developer Co-op — *Kitchener, ON*

- Designed scalable full-stack features using **React**, **JavaScript**, **C#**, and **Java** within an Agile environment, contributing to over 8 sprint releases that enhanced North America's leading MES platform.
- Reduced system support tickets by 70% by integrating APIs and optimizing **real-time data retrieval**.
- Improved operator efficiency by 25% through the redesign of UI components using React and NiceGUI on **Dockerized Ubuntu/Linux** environments, applying **design thinking** principles for better usability.

LEADERSHIP & EXTRACURRICULARS

McMaster Engineering Society
Aug 2025 – Present

Full Stack Web Developer — *Hamilton, ON*

- Developed full-stack web features for the MES clubs portal using **Node.js, TypeScript, and MongoDB**, improving digital workflows for 5,000+ students and 50+ organizations.

McMaster Engineering and Management Society
Aug 2024 – Present

Co-President — *Hamilton, ON*

- Led and collaborated with a 20-member executive team to deliver academic, professional, and community initiatives that enhance engagement and career development for 300+ Engineering and Management students.

Solar Car
Aug 2023 – Aug 2024

Firmware Team Member — *Hamilton, ON*

- Redesigned GUI using **Python (PyQt)** for vehicle driver interface, optimizing embedded design by 85% and collaborating with firmware teams at McMaster Solar Car Project for the 2024 American Solar Challenge.

PROJECTS

Dilated Cardiomypopathy (DCM) Graphical User Interface (GUI) | *Pyserial, Tkinter, MATLAB, Simulink*

- Designed a Pacemaker Diagnostic and Control **GUI** in **Python**, **Tkinter** library and **Simulink** to simulate pacing modes, visualize cardiac signals, and enable real-time parameter tuning through an interactive software interface.
- Improved user **data management** through features like registration, login, and account deletion.

EduBot | *React.js, Node.js, Arduino, C++, NLP, Circuit Design*

- Engineered an AI-powered educational robotics platform at DeltaHacks IX that leverages **natural language processing** to parse voice commands and autonomously generate executable **Arduino C++** code, enabling real-time hardware control and bridging the gap between conversational interfaces and embedded systems programming.
- Implemented end-to-end **speech-to-code pipeline** integrating voice recognition APIs with custom **LLM prompt engineering** to translate natural language instructions into syntactically valid microcontroller firmware.