Kunal Pandya

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PROFESSIONAL SUMMARY

Dedicated Software Engineering Student with hands-on experience in C# programming within the .NET framework and C++ development using the MFC library as a Systems Design Engineer Co-op at Hitachi Truck Manufacturing. Adept in Back end and object-oriented programming. Eager to explore the filed generative AI and Agentic AI workflows.

SKILLS

Programming Languages and Libraries: Python, TensorFlow, Sklearn, HTML, CSS, Tailwind, JavaScript, Next.js, Typescript, PHP, MySQL, Java, Spring Boot Maven, C/C++, C#, .NET, Visual Basic Applications (VBA), PowerShell.
Technical Skills: Object Oriented Programming, API-based Development, Multi-threaded Programming, Development using Data Structures and Algorithms, Implementation of Design Patterns with SOLID principles, Prompt Engineering, Data Augmented Generation, Model Context Protocol (MCP) development, Linux/Unix development.
Professional Skills: GitHub, GitLab, Docker, Jenkins, Agile Development Cycle, NX, SolidWorks, MS Power tools.

PROFESSIONAL EXPERIENCE

Hitachi Construction Truck Manufacturing Ltd.
Systems Design Engineer Co-op May 2024 – Present

- Demonstrate organization skills by independently designing and developing a virtual dashboard using the MFC library in C++, enabling real-time visualization of sensor-based CAN data, along with a UI test bench to simulate CAN data communication.
- Leveraged critical thinking to design and implement algorithms in C# using .NET and OpenNX, automating manufacturing-related calculations in NX, saving senior designers up to 80 hours annually.

Vale
Information Technology Co-op June 2023 – Sept 2023

- Demonstrate problem-solving skills by automating data update processes and ensuring access to up-to-date critical metrics within the Project Controls Department, enhancing department efficiency.
- Showcase adaptability and technical expertise by designing and maintaining an internal SharePoint website, streamlining operations, and facilitating efficient information management for the Project Controls team.

Ultimate Codes
Programming Tutor Sept 2020 – April 2024

- Demonstrate effective communication and collaboration skills by customizing the curriculum for each student.
- Display leadership and adaptability by teaching students of a vast age group in various programming languages.
- Exhibit dependability by taking over classes for other tutors in cases of emergencies and cancellations.

PROJECT

K-Means-Clustering - Data Structures Final Project 🔗

- Implement the basis of the K-means-clustering algorithm used in modern machine learning projects using object-oriented Java to demonstrate the importance of selecting the optimum data structure for a given problem.

Rott-Ed – Hackathon Project 🔗

- Developed Rott-Ed, an AI-powered application that converts academic PDFs into TikTok-style videos by leveraging multi-layered prompt engineering with Google Generative AI APIs for summarization, image generation, and speech synthesis, supported by a Python backend (Flask, MoviePy, gTTS, Pillow) and an HTML/CSS/JavaScript frontend with Android mobile integration.

Real-Time Data Telemetry - Ontario Tech Racing 🔗

- Use PCAN-Basic, Cantools, Python-Can, Tkinter and Matplotlib libraries in Python to design a dynamic, dbc-based telemetry interface to display real time data passed over multiple pipelines of a Controlled Area Network (CAN) bus.

EDUCATION

Ontario Tech University

- Bachelor Of Software Engineering (CGPA: 3.79) May 2026