

Daniel Wang

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EDUCATION

Carleton University

Bachelor of Engineering, Computer Systems Engineering

September 2024 – April 2029

- Focus: Embedded Systems, Software Development, Automation, Python & C++ Programming
- Relevant Courses: Mechatronics, Data Management, Programming, Data Structures & Algorithms, OOP, Digital Systems

WORK EXPERIENCE

Firmware Development Student

May 2026 – August 2026

Ford of Canada

Ottawa (Kanata), ON

- Made functional code changes across 49 ECG variants and 6 TCU variants, including DaVinci Configurator updates such as DBC integration
- Flashed and debugged firmware directly on hardware, monitoring SRAM usage and reducing consumption by 10–25% through removal of unnecessary code
- Tracked and managed development tasks in Jira within an Agile DevOps workflow
- Maintained version control across all variant codebases using GitHub

Research and Data Analysis Intern

March 2020 – November 2022

miRonCol Diagnostics

- Cleaned, tested, and analyzed large biological and clinical datasets to identify trends and anomalies
- Applied statistical reasoning to generate actionable research insights, improving team efficiency
- Prepared structured reports summarizing findings for cross-functional research teams
- Improved data reliability by validating inputs and flagging inconsistencies

PROJECTS

Poker Analytical Helper – AI Strategy Tool | *Python, Claude API*

May 2025 – July 2025

- Integrated Claude API to provide AI-driven poker strategy based on hand strength and pot odds
- Used OpenCV and Tesseract for OCR-based game state extraction from screenshots
- Developed a Tkinter GUI with hand history tracking and dual input modes

Smart Parking Marketplace Application | *JavaScript*

December 2025 – Present

- Developed a React-based mobile/web UI for real-time parking space booking via geolocation
- Built Flask REST APIs for user login, listings, and booking logic
- Focused on modular components, accessibility, and future scalability

Hopeful Ribbon | *Python, TensorFlow*

March 2023 – April 2023

- Built a machine learning web application to assess breast cancer risk from fine-needle aspiration (FNA) cell dataset parameters
- Reduced 30 initial features down to the 3 most significant through feature selection and dimensionality reduction, then trained a K-Nearest Neighbors (KNN) model reaching 91% accuracy with a 15% false negative rate
- Set up an automated alert system that used email and geolocation APIs to connect at-risk users with their closest specialized medical facility

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, C, HTML

Tools: Git, GitHub, Jenkins, Linux, VS Code, Docker (learning), Jira, DaVinci Configurator

Automation & Testing: pytest, unittest, logging, automated scripting

Embedded Concepts: Embedded Linux, OS-level Debugging, ECG/TCU Firmware, DBC Integration, Flashing & Debugging, SRAM Optimization

Frameworks & Libraries: Automated Test Plans, Modular Systems Design, Flask, Scikit-learn, OpenCV, Tesseract OCR, Tkinter, Geolocation Services, Mobile/Web App Frameworks, Location APIs

SOFT SKILLS

Quick learner able to understand new technologies rapidly • Strong problem-solving and debugging capabilities • Effective communicator in multi-site team environments • Motivated and self-driven in agile settings