

Simardeep Dhanda

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EDUCATION

McMaster University

Bachelor of Engineering in Software Engineering

Hamilton, ON

Sept 2023 – Apr 2027

EXPERIENCE

Software Developer

McMaster Exoskeleton

Jan. 2025 – Present

Hamilton, ON

- Implemented embedded control systems for lower-limb exoskeletons, increasing load-carrying capacity 40% and reducing operator fatigue 30% by leveraging real-time sensor fusion and adaptive gait control
- Implemented automated data-acquisition, testing, and diagnostic tools that improved sensor calibration accuracy by 30%, cut integration time by 40%, and reduced mean time to diagnose issues by 35% by unifying mechanical, electrical, and software telemetry

Software Developer Coordinator

Canada Learning Code

Dec 2023 – Present

Toronto, ON

- Led 20+ immersive technology bootcamps for 100+ Greater Toronto Area students, improving participant coding proficiency by 40% as measured by pre/post assessments, by utilizing challenge-based curricula and delivering instruction in Python, JavaScript, and SQL.
- Enhanced learning experience, increasing participant satisfaction scores and reducing project delivery time by 20%, by coordinating cross-functional teams and centralizing updates and documentation in Jira and Notion

PROJECTS

MealMap - McMaster Campus Meal Planner | *Python, FastAPI, SQL, Supabase, Next.js, React, TypeScript*

- Developed MealMap, increasing student access to real-time campus meal and nutrition data and reducing average meal-selection time by 35% by scraping the McMaster Nutrition Services website to deliver live menu items.
- Built a personalized meal-planning experience that reduced users' average meal costs by 20% by implementing a React UI for dietary and budget input.
- Designed a PostgreSQL schema for user history, reducing average query latency by 40% by normalizing data models and adding targeted indexes.

Book Finder - Multi-Library Book Search Engine | *Node.js, Express.js, JavaScript, YAML, HTML, CSS*

- Built a Node.js and Express web app that surfaced real-time ISBN availability across 6+ library systems, reducing manual lookup time by 90% through consolidated catalogue APIs.
- Implemented a modular adapter system with YAML-configurable integrations and robust error handling, improving API reliability 2x.
- Eliminated HTTP 413 payload errors and restored 100% successful handling of large API responses by tuning Express body size limits.
- Implemented a user-friendly prototype interface for medical professionals, reducing diagnostic turnaround time by 35%, by delivering immediate disease-detection alerts.

Disease Detection with EHR Machine Learning | *Python, Pandas, NumPy, scikit-learn, Matplotlib*

- Developed logistic regression and SVM classifiers for EHR data, achieving 91.5% accuracy and > 0.90 ROC-AUC through feature engineering and hyperparameter tuning; earned 2nd place at Canada's Science Fair.
- Improved predictive accuracy by 12% and reduced training time by 25% by refining null handling and feature engineering.
- Implemented a user-friendly prototype interface for medical professionals, reducing diagnostic turnaround time by 35%, by delivering immediate disease-detection alerts.

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, TypeScript, SQL, HTML/CSS, Bash, MATLAB

Frameworks & Libraries: React, FastAPI, Node.js, Express.js, TensorFlow, NumPy, Pandas, Tailwind CSS

Tools & Platforms: Git, GitHub, VS Code, PyCharm, Jupyter Notebooks, PostgreSQL, Google Cloud Platform (GCP), AWS, Azure, Vercel