

LUIS DELOTAVO

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EDUCATION

Western University | *Bachelor of Engineering in Software Engineering*

London, ON

Sep 2020 - Apr 2025

- **Courses:** Data Structures and Algorithms, Operating Systems, Database Management, Computer Networking, Cloud Computing, Web Technologies, Machine Learning, Information Security, Artificial Intelligence

TECHNICAL SKILLS

Programming Languages	TypeScript, JavaScript, Python, Java, C#, SQL, HTML/CSS
Frameworks & Libraries	Angular, React, Spring Boot, Flask, Node.js, Next.js, Express, Numpy, sklearn, Jest
Tools & Technologies	Docker, Grafana, Git, Postman
Cloud Platforms & Databases	Google Cloud Platform (BigQuery), Amazon Web Services (EC2, S3, Glue), Firebase, PostgreSQL, MongoDB
Methodologies	Agile, Scrum, Continuous Integration/Continuous Deployment (CI/CD)

EXPERIENCE

J.D. Power | Software Engineering Intern

London, ON

May 2023 - Aug 2024

- Developed components for an AI-driven full-stack ETL platform within the Artificial Intelligence Cloud Delivery Unit using Angular, TypeScript, Python, GCP, Firebase, and Docker.
- Designed and implemented a Google BigQuery rollback mechanism that optimized SQL database workflows, reduced system downtime by 35%, and ensured uninterrupted access to critical data.
- Enhanced application reliability by maintaining comprehensive documentation, prioritizing high-impact Jira tickets in Agile sprints, and increasing unit test coverage to over 60% with Jest—contributing to a 90% on-time release rate.

Glendor | Software Development Intern

Remote

May 2022 - Aug 2022

- Contributed to the Protected Health Information (PHI) Sanitizer team by developing an AI-based solution that automated the removal of sensitive information from medical data, reducing manual processing time while ensuring compliance with privacy regulations.
- Engineered a robust Health Level 7 (HL7) to XML conversion algorithm, incorporating web-scraping techniques for header extraction to achieve efficient, reliable data transformation across healthcare datasets.

PROJECTS

London Transit Delays | youtube.com/london-transit-delays

Sep 2024 - Apr 2025

- Led award-winning project (1st place, Western University Capstone) that orchestrates containerized microservices via Docker Compose, integrating Grafana, Jupyter Notebooks, MongoDB, and Node.js to process real-time transit and weather data.
- Engineered an end-to-end ETL pipeline for data collection, model training, and deployment with predictive analytics that forecasts transit delays, resulting in 8+ dynamic dashboards providing actionable insights for city transit riders.

Stockr | www.stockr.info

Feb 2025 - Apr 2025

- Developed a full-stack finance application with secure RESTful APIs enabling users to manage watchlists, visualize portfolio performance, and track asset distribution across different investment categories.
- Implemented architecture with Firebase Authentication, Next.js frontend, Flask backend, and PostgreSQL database, all containerized with Docker for consistent deployment.
- Integrated OpenAI's API with Retrieval-Augmented Generation (RAG) to create a conversational financial advisor that provides personalized investment insights based on user portfolio, current market data, and twitter sentiment.

Cardio Risk Engine | github.com/luisdelotavo/cardio-risk-engine

Nov 2024 - Dec 2024

- Developed a high-accuracy (90%) machine learning pipeline for cardiovascular risk prediction using Random Forest and Neural Network models, with comprehensive hyperparameter tuning and model evaluation.
- Enhanced model performance through data preprocessing techniques including binary encoding, one-hot encoding, and feature scaling to identify and prioritize key risk factors.
- Validated model reliability using k-fold cross-validation, ROC-AUC, and F1 metrics, demonstrating the solution's potential for early healthcare intervention and risk assessment.