

Martin Silva-Diaz

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Technical Skills

Current Engineering student at the University of Waterloo looking to contribute to process and manufacturing optimization with skills in:

- **Process & Quality Improvement** | Lean Six Sigma, process analysis, identifying inefficiencies and waste reduction options.
- **Quality Assurance** | Project coordination, documentation of testing methods, product quality tracking, and compliance preparation.
- **Programming Languages** | Python (Flask), SQL (Postgres), Excel (VBA), HTML, CSS, R.
- **Data & Analytics** | Statistical analysis, process optimization, database management, data modeling & visualization.
- **Languages** | English (fluent), Spanish (fluent), French (DELF Diploma).

Experience

Product Compliance Intern | IPEX by Aliaxis

May 2025 – Aug 2025

- Developed Product Quality Plans (PQPs) to support quality assurance and adequate testing for 500+ products in large-scale thermoplastic manufacturing across multiple fabrication plants for municipal water infrastructure projects across North America.
- Developed a new document to quantify defects in fabricated products, allowing for minimized health and safety risks.
- Coordinated with compliance engineers and quality plants from various provinces to prepare technical documentation ensuring compliance of hundreds of products per product line.

Software Developer | Magma Core (Linux Foundation Project)

Aug 2025 – Present

- Contributing as a mentee to backend development and open-source API design for a Linux Foundation project (originally founded by Meta) focused on expanding internet access in underserved communities.
- Engaging in backend development in a collaborative open-source environment.

Autonomy Software Developer | Waterloo Aerial Robotics Group

Aug 2025 – Present

- Taking part in autonomy software development with the Waterloo Aerial Robotics Group focused on drone automating.
- Developed an automated parameter verification tool for 1,000+ flight control settings using MAVLink data from a Pixhawk interface.
- Implemented computer vision simulation using YOLO and PyTorch, allowing drones to identify targets and follow paths autonomously.

Software Engineer | Krachi's Space Technologies Inc

Apr 2025 – Aug 2025

- Collaborated with a startup technology company focused on building secure, scalable software and financial technology platforms.
- Contributed to a prototype financial platform with mobile app integration for secure data management.
- Built backend systems and APIs to handle client information and financial transactions.

Aquatics Instructor/Lifeguard/Cashier | Town of Oakville

Sep 2023 - Aug 2024

- Managed and coached 50+ students per term, improving participant progress tracking using structured assessment reports.
- Maintained public relations and pool safety, able to handle multiple tasks and communicate effectively with patrons and students.
- Worked in financing transactions and regulatory reporting of sales with accuracy and demonstrated strong interpersonal skills.

Projects

Stock Dashboard | Python Flask, SQL, PostgreSQL, JavaScript, CSS, HTML

- Developed a full-stack stock dashboard using PostgreSQL that provides real-time updates of held stocks from various brokers.
- Integrated live market data through the Yahoo Finance API for automated retrieval and visualization;
<https://stock-dashboard-5ivw.onrender.com>

Financial Planning Tool | Excel, VBA

- Developed an Excel VBA-based financial budgeting tool with automated data processing for expense tracking.
- Interface uses intuitive spreadsheet navigation and real-time data validation to ensure accurate financial calculations.

Personal website | HTML, CSS

- Developed an html based personal website; <https://martins26.github.io/Martin-Silva-Diaz-Personal-Website/index.html>

Education

University of Waterloo

Sep 2024 - Apr 2029

Bachelor of Applied Science in Management Engineering, specializing Artificial Intelligence.

- Coursework in lean six sigma, process optimization, programming, data structures & algorithms, stochastic statistics and data modeling.
- Building foundational skills in data science, problem-solving, project management and process improvement.

Sheridan College

Jul 2023 - Aug 2023

- Completed the Data Science Foundations course as part of the Certification in Data Analytics (CDATA), covering data analysis, statistics, visualization, quality and applications in financial performance.