Martin Silva-Diaz

905-808-7950｜martin.eduardo.silva.diaz@gmail.com｜linkedin.com/in/martinsilvadiaz｜https://github.com/msilvadi

Technical Skills

- **Programming Languages**｜Python, SQL, Excel (VBA), HTML, R, Typescript.
- **Libraries**｜Python Flask, NumPy, Pandas, matplotlib, SQLAlchemy, React, Tailwind, Bootstrap.
- **Data & Analytics**｜ Data Modeling, Database Management Monte Carlo Simulation, Object Oriented Programming.
- **Languages**｜ English (fluent), Spanish (fluent), French (DELF Diploma).
- **Quality Assurance**｜ Project coordination, documentation of testing methods, product quality, and compliance preparation.

Experience

Business Administrator Intern｜ Scotiabank (Wealth Management)   Jan 2026 – May 2026
- Produced reports for Scotia Wealth Management supporting external stakeholder communications and audit preparation.
- Automated workflows using Excel VBA, improving reporting efficiency and ensuring timely delivery and reliability of deliverables.
- Analyzed portfolio data and financial statements to verify adherence to trading regulations.

Product Compliance Intern | IPEX by Aliaxis   May 2025 – Aug 2025
- Developed Product Quality Plans supporting risk-based quality assurance and testing for 500+ thermoplastic products across multiple fabrication plants serving municipal water infrastructure projects across North America.
- Designed a standardized defect-quantification framework for fabricated products, enabling data-driven risk assessment and reduction of health and safety exposure.
- Collaborated with engineers and quality teams nationwide to standardize technical documentation and ensure consistent regulatory compliance across plants.

Autonomy Software Developer | Waterloo Aerial Robotics Group   Aug 2025 – Dec 2025
- Took part in autonomy software development with the Waterloo Aerial Robotics Group focused on drone autonomy & telemetry.
- Developed automated parameter verification tool for 1,000+ flight control settings using MAVLink data from a Pixhawk interface.

Software Engineer | Kspace Technologies   Apr 2025 – Aug 2025
- Volunteered at 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.
- Worked in financing transactions and regulatory reporting of sales with accuracy and demonstrated strong interpersonal skills.

Projects

Portfolio Metrics Analyzer | *Python Flask, PostgreSQL, Pandas, NumPy, React, Bootstrap*
- Developed a full-stack portfolio analysis tool enabling users to track customized portfolios, visualize historical performance, and compute the efficient frontier using 20,000 Monte Carlo simulations to evaluate risk-return trade-offs.
- Computes recommended equity allocations based on user preferences including max Sharpe ratio, volatility, and target return.
- Allows users to save portfolio data through a PosgrestSQL + Supabase server.
- https://portfolio-metrics-analyzer.vercel.app/

Financial Planning Tool | *Excel, VBA*
- Developed an Excel VBA-based financial budgeting tool with automated data processing for expense tracking and visualization.
- Implemented real-time data validation and structured spreadsheet navigation to ensure reliable financial calculations.
Produced macro-driven pivot charts and dashboards to visualize spending patterns and trends.

Digital Portfolio |*React, TailWind*
- Developed a React based portfolio website to showcase experience & projects; https://martin-silva-diaz.vercel.app/

Education

University of Waterloo   Sep 2024 - Apr 2029
Bachelor of Applied Science in Management Engineering (Artificial Intelligence Option)
- Coursework in software design, data structures & algorithms, probability & statistics, economics, data modeling and optimization.
- Building foundational skills in data science, full-stack development, financial markets and machine learning.