Matthew Eiley

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Education

McGill University, BEng – Software Engineering Co-op — Aug 2023 – May 2027

- **GPA:** 3.9/4.0
- **Distinctions:** Québec Perspective Scholarship (full tuition); Hatch Scholarship (McGill Engineering's largest scholarship, awarded for academic excellence and overall contributions in engineering); Dean's honours list.

Experience

Data Engineering Intern, RBC Wealth Management – Montreal, QC — May 2025 – Present

- Designed and deployed multiple automated ETL workflows using Python (Pandas, NumPy, Matplotlib) and SQL to interface with internal RBC APIs and external financial data providers (Bloomberg, FactSet, TipRanks).
- Leveraged these pipelines to extract, model, analyze, and visualize client and market data, accelerating quant-driven equity screening, risk management, and portfolio optimization for PMs. Created automations to reduce each analyst's prep time by 1.5+ hours/day and saved admin 4+ hours/day on bookkeeping tasks.

Co-Founder, Algorithmic Trading Fund Manager, Martlet Fund McGill — May 2025 – Present

- Co-founded McGill's first hedge fund club. Co-managed the Quantitative & Algorithmic Trading team of 13 analysts, building end-to-end systems for backtesting, portfolio optimization, and risk management.
- Designed Python-based data pipelines and frameworks to source and clean market data. Implemented different algorithmic trading strategies to yield returns for the fund.

Software Engineering Intern, BL!NK Media – Montreal, QC — May 2024 - Aug 2024

- Applied numerical methods and gameplay scripting to develop core mechanics, contributing to the Bouncy Wheel Racing app (iOS, macOS, Android). Collaborated in an Agile team for efficient development and iteration.
- Engineered physics-based simulation systems in C# (Unity), modeling traction, compression dynamics, power output, and fuel consumption to replicate authentic vehicular behavior across diverse racing environments.

Personal Projects

Options Pricing Engine — GitHub Repository

- Developed a modular Python engine for pricing financial options using analytical and approximative models (Black-Scholes-Merton, Black-76, Garman-Kohlhagen, Turnbull–Wakeman, Kirk's, Bjerksund-Stensland).
- The engine supports European, American, commodity, FX, and spread options, with the UI displaying implied volatility calculations, Greeks visualizations, educational content, and risk-management insights.

Quantitative Trading Algorithm — GitHub Profile

- Developed a trading algorithm using quantitative signals to generate and execute buy/sell decisions. Integrated data ingestion, signal processing, and portfolio rebalancing with performance tracking and risk controls.

Personal Health Data Analytics — GitHub Repository

- Built a web application that pulls metrics from my WHOOP to track and analyze daily sleep, recovery, strain, and cardio-respiratory measures. Developed data-based insights, trend analyses, and performance summaries.

Technical Skills and Interests

- **Languages:** Python, C++, SQL, R, Julia, Java, C, C#, OCaml, Assembly, Bash, JavaScript, HTML, CSS, UML.
- **Technologies:** RESTful APIs, PostgreSQL, Pandas, NumPy, SciPy, Matplotlib, Git, Linux, React Native.
- **Skills:** Calculus I, II, III; Differential Equations, Linear Algebra, and Discrete Mathematics; Probability, Statistics, and Stochastic Processes; Data Structures and Algorithms; Data Science and Analytics; Data Modeling and Visualization; ETL/ELT Pipelines; Financial Engineering, Risk Management, and Optimization Techniques.
- **Other Activities:** Soapmaking, Ironman training, A Song of Ice and Fire, Rubik's cube, Hiking, Meditation.