ETHAN SOLNIK

(647) 987-2235 | ethan.solnik@queensu.ca | www.linkedin.com/in/ethansolnik/

EDUCATION

Bachelor of Applied Mathematics and Computer Engineering, Queen's University **2023 – 2027**
- GPA: 3.96/4.00 with Dean's Scholar Distinction
- Expected Graduation: May 2027

Bloomberg Market Concepts (BMC) Course, Bloomberg for Education **2024**

PROFESSIONAL EXPERIENCE

Incoming Global Wealth and Asset Management Intern, Manulife, Toronto, ON **Summer 2025**
- Develop low/no-code automations, query databases, and generate reports to improve operational efficiency
- Research and analyze industry trends and market positioning to inform strategic decision-making

Data Analyst, Branch Energy, Toronto, ON **Summer 2024**
- Developed a customer onboarding application using Python and SQL, reducing data aggregation time by over 2x
- Led a billing system migration for a client base of 1,200+ accounts, using SQL, CSV, and JSON data formats
- Analyzed ML-driven DoD pricing forecasts to refine energy arbitrage and hedging strategies

Software Developer and Marketing Intern, Supernatural Longevity, Toronto, ON **Summer 2024**
- Created a multi-agent AI pipeline with OpenAI GPT-4 API and the Make Automation Tool to create blog content
- Automated HTML-to-text parsing from RSS feeds, hierarchical task sequencing, and Google Docs API integration

EXTRACURRICULARS

Quantitative Analyst - Queen's University Algorithmic Network & Trading Team **2024 – Present**
- Developing a trading algorithm for the ICT PO3 strategy using a Scikit-learn Random Forest Classifier to identify accumulation, manipulation, and distribution based on daily bias, FVGs, HTF PDAs, and liquidity sweeps
- Automating backtesting, trade execution, and market data sourcing with Alpaca API V2
- Completed a 10-week course on stochastic calculus, computational statistics, derivative pricing, and risk

Computer Vision Engineer - Queen's University AI and Machine Learning Team **2024 – Present**
- Creating a road damage detection system using the YOLOv12 CNN, achieving 55% mAP
- Compiling a geospatial database to store road damage attributes with centimeter precision
- Building a full-stack application with React and Node.js for the frontend and Azure for the backend

PROJECTS

Traffic Signal Coordination – Engineering Practice Module **2024**
- Fine-tuned a consensus algorithm to increase traffic flow in Toronto by 25% using MATLAB and Python
- Integrated geospatial libraries with road network datasets to optimize traffic signal coordination

Social Media Platform – Data Structures and Algorithms **2024**
- Built a 10,000-user social media network in C programming language

ADDITIONAL INFORMATION

- US and Canadian Citizenship – Work Visa Not Required
- Languages/Libraries: Python, C, C++, Java, MATLAB, SQL, VHDL | Pandas, PyTorch, TensorFlow, React, Node.js
- Courses: DSA, Digital Systems, Computer Architecture, Linear Algebra I & II, Real Analysis, Algebraic Structures
- Hobbies: Guitar for 12+ years, competitive soccer and hockey, weightlifting, and computer-building