Nicholas Xydis

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Education

Concordia University — Expected Dec 2029
Bachelor of Computer Science (via Certificate in Science and Technology) — *Montreal, QC*

Experience

Software Developer & IT Administrator — Apr 2022 – Feb 2026
Centre D'Auto Allard — *Montreal, QC*

- Developed and deployed the auto shop's bilingual website in TypeScript and React with GitHub Actions CI/CD and 67 automated tests, serving 75+ daily users and contributing to a 55% increase in appointments.
- Generated $12K+ in annual revenue with a Python XGBoost model predicting when customers are due for service.
- Implemented a PostgreSQL database for inventory and operations, reducing manual tracking by 12 hours per week.
- Grew the shop's Google Business Profile to 70+ reviews and 1,500+ monthly views, tracked through analytics.
- Administered company computers, network, and security systems, troubleshooting hardware and connection issues.

Projects

QUARCC Purple | *International Finalist @ McGill-FIAM Hackathon* — Sep 2026 – Nov 2026

- Led QUARCC Purple to be selected as 1 of 10 finalists against teams from Canada, the US, and Europe, pitching our $1B market-neutral fund to 12 judges including senior investors from BlackRock and Fidelity.
- Optimized 300 stocks via E-LASSO, LightGBM, cvxpy for a 4.21 out-of-sample Sortino, 0.52% Ulcer, 0.01 beta.
- Ran 8 local Gemma 4 LLM agents to read filings, find hidden risks, and simulate how AI investors crowd trades.
- Shipped a TypeScript, React, and WebGL website explaining our fund with a 3D tour and an AI-narrated film.

Stage | *Python, SQLite, MCP, Textual, GitHub Actions* — Jul 2026 – Present

- Launched an open-source Python data pipeline with 500+ PyPI installs, pulling Canadian and US CS internships from 2,000+ employers via 13 ATS APIs, filtering 340,000+ postings down to 3,700+ eligible internships in SQLite.
- Integrated an MCP server with prompt injection guards, connecting Claude Code, Codex, and 50+ other AI apps.
- Built a zero-config CLI and TUI with full-text search, an application tracker, automated syncs, and Discord alerts.
- Verified code quality with 5,300+ tests at 94% coverage and native support for Windows, macOS, and Linux.

BankLite | *C#, ASP.NET Core, PostgreSQL, Docker, Linux, JavaScript* — Mar 2026 – Sep 2026

- Independently engineered a full-stack banking app in Clean Architecture with a REST API, secure authentication, real-time peer-to-peer payments, an AI financial assistant, and bilingual support, reaching 1,600+ unique visitors.
- Load tested with k6 under 1,000 concurrent users, holding 1,184 req/s, sub-second p99 latency, and 0.00% failures.
- Hardened a Linux cloud VPS with Nginx, Cloudflare, CI/CD, 24/7 monitoring, and 7 custom rate limits.
- Validated reliability and security with ACID transactions, 482 tests (448 backend, 34 E2E), and OWASP ZAP.

Activities & Certifications

Quantitative Analyst — Sep 2026 – Present
Quantitative Research and Competitions Club (QUARCC) — *Montreal, QC*

- Architecting HeapStreet, a C++ quant platform where players face 12 AI rivals in 470+ algorithmic challenges.
- Qualified as a top-15 campus finalist in the Global Market Making Games, spanning 1,400+ students in 16 nations.
- Presenting quant research to 25+ members in weekly meetings, from market making to machine learning.

Top 16 Nationally — Oct 2026 – Present
ASNA Actuarial Case Competition — *Montreal, QC*

- Modeled death risk for 10,000 insurance clients in Python and scikit-learn, finishing 5th of 56 teams in Round 1.
- Trained an interpretable logistic regression ensemble that beat gradient boosting in 95 of 100 cross-validation runs.

Options 101 | *Akuna Capital* — Sep 2026

Technical Skills

Languages: Python, C#, C++, Bash, SQL, TypeScript, JavaScript
Machine Learning & Data: PyTorch, scikit-learn, pandas, NumPy, LightGBM, XGBoost
Databases & Frameworks: PostgreSQL, SQLite, SQL Server, React, .NET, ASP.NET Core
DevOps & Tools: Linux, Docker, Git, Azure, CI/CD, GitHub Actions, Nginx, Playwright, Unity
Spoken Languages: English & French (Bilingual)