

William Caron-Bastarache

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EDUCATION

Université de Montréal <i>B.Sc. in Computer Science (Expected 2027)</i> <ul style="list-style-type: none">Relevant coursework: Software Engineering, Algorithms & Data Structures, Theory of Computation, Probability & Statistics, Economics	Montréal, QC 2024 – Present
Cégep Édouard-Montpetit <i>Business Administration with Mathematics</i>	Longueuil, QC 2021 – 2024
École internationale Lucille-Teasdale <i>High School Diploma</i>	Brossard, QC 2016 – 2021

TECHNICAL SKILLS

Programming: Java, Python, Bash, HTML/CSS
Familiar with: SQL, C, NumPy, Pandas, scikit-learn, JavaScript/TypeScript (React, Next.js)
Tools: Git, GitHub, GitHub Actions, Linux, Power BI, Docker, Maven, IntelliJ, VS Code, LaTeX
Languages: French (native), English (fluent), Spanish (basic)

PROJECTS

Event-Driven Market Probability Engine (In Progress) <ul style="list-style-type: none">Quantitative research platform using PostgreSQL, Python (NumPy, Pandas), dbt, and Power BI.Engineering statistical features (returns, rolling volatility, momentum) from historical market data.Developing a probabilistic classification model to estimate next-day market direction.Building reproducible SQL transformations and validation tests using dbt.Designing dashboards to evaluate signal quality and backtest strategy performance.	2026
MaVille Java, Maven, REST, CLI App <ul style="list-style-type: none">Developed a municipal management system with persistence, user profiles, notifications, and API integration.Implemented resident/contractor features and data persistence (CSV/JSON).Added automated testing with JUnit.	2025
Software Testing & CI Quality Gate (GraphHopper) Java, JUnit, JaCoCo, PIT, GitHub Actions <ul style="list-style-type: none">Designed and implemented targeted unit tests on core utility classes to improve code robustness.Measured test coverage before/after using JaCoCo and evaluated fault detection with mutation testing (PIT).Built a CI quality gate in GitHub Actions that fails builds on mutation score regression using a persisted baseline.Automated CI reporting with persisted baselines to prevent quality regressions across builds.	2025

EXPERIENCE

Lifeguard <i>City of Brossard</i> <ul style="list-style-type: none">Ensured safety and responded to emergencies in high-traffic pools.Developed teamwork, communication, and crisis management skills.	2022 – Present Brossard, QC
Nightshift Receptionist <i>Hotel Labelle</i> <ul style="list-style-type: none">Managed front-desk operations during night shifts, ensuring safety and service continuity.Strengthened organizational and communication skills in a high-responsibility role.	2024 Montréal, QC

INTERESTS

Artificial Intelligence, Statistics, Finance, Software Development, Open-source software, Fitness