

Eeshan Agarwal

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EDUCATION

Western University

BESc (Engineering Science) & HBA, Ivey Business School (Combined Degree)

EXPERIENCE

Algorithmic Trading Developer — 0DTE Options Strategy

2026 – Present

Independent Trading Partnership

Remote

- Automated daily capture of QQQ options-chain data by building a **WebSocket pipeline** against the IBKR API, producing the historical dataset for strategy backtesting
- Partnering with an independent trader managing a \$200K portfolio to design and validate a 0DTE options strategy before live deployment
- Developing backtests on the collected QQQ options-chain history to quantify the strategy's risk/reward profile before live capital is deployed

PROJECTS

RivalRuns | *Python, MediaPipe, WebSocket, Ursina/Panda3D*

2026

- Won **2nd Best Overall Hack** among **25+ teams** at Hack the Valley (HackDays) with a controller-free, two-player game driven by real-time body tracking
- Engineered a **dual-webcam control system** using MediaPipe pose and hand tracking to turn body movement and hand gestures into live game inputs
- Kept input latency low enough for competitive play by running pose tracking in-process and streaming the second player's inputs over a one-way WebSocket link
- Built a full 3D game scene (chase camera, procedural skyline, coin economy, shield mechanic) with rule-based collision detection across 3 lanes and 3 obstacle types

Sentiment Desk | *Python, Next.js, TypeScript, PostgreSQL, Prisma, Gemini API*

2026

- Built an LLM data pipeline that scrapes **11 finance subreddits**, processes **100+ posts/day**, and has extracted **1,200+** structured investment theses
- Engineered an unattended Python worker that recovers from rate limits and partial failures without losing a day's backlog
- Cut noise from extracted theses with a filtering prompt that discards trade-diary, P&L-screenshot, and meme posts, keeping only arguments "a stranger could evaluate"
- Recorded the ticker price at extraction for every thesis, powering per-ticker sentiment-vs-price divergence flags and laying the groundwork to backtest whether Reddit sentiment predicts price moves

CardIQ | *Django, PostgreSQL, Docker, Fly.io*

2026

- Built and deployed a full-stack credit-card recommendation engine (live at cardiq.fly.dev) that scores **30+ Canadian credit cards** against each user's real spending profile
- Designed a multi-factor scoring pipeline—hard eligibility filters, reward valuation across 7 spending categories, fee/APR deduction, and perk monetization—using Decimal-precision arithmetic to rank a personalized top 3
- Shipped a containerized Django/PostgreSQL app on a single 256MB Fly.io instance with Gunicorn, WhiteNoise static compression, Cloudflare R2 media storage, and Sentry error monitoring

Calmpost | *Arduino, C++, Python, Gemini API, Flutter*

2026

- Won **2nd Best Hack** in the **UofT School of Cities track** at Hack the Valley 11 with a team of 4 building a sensor-instrumented smart compost bin
- Wired and calibrated, with teammates, an **Arduino sensor array** (2 temperature, 2 moisture, 1 CO₂) that monitors conditions inside the bin and feeds the app's sensor chart
- Built a motion-triggered **computer-vision service** in Python that captures webcam frames and classifies each item dropped into the bin with the Gemini API
- Developed Flutter (Riverpod) features including sensor-chart markers that tag every camera drop with what was detected and when, a rewards inbox, and a five-page onboarding tutorial

TECHNICAL SKILLS

Languages: C++, Python, SQL, TypeScript/JavaScript, Dart

Embedded & Hardware: Arduino, sensor wiring & calibration, computer vision (MediaPipe, webcams)

Tools: Git/GitHub, Docker, PostgreSQL, Fly.io, Vercel

Frameworks & APIs: Flutter, Next.js, Django, Flask, Gemini API, IBKR API, WebSocket