

COOPER NORMAN

Regulated-Fintech · Backend / Risk Engineer

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Founder-engineer who builds back ends that have to be correct under real money. I built and ran ShareShark's money core solo — a Django/PostgreSQL transaction core with idempotent ACH payouts and database-enforced balance invariants, plus a full KYC / AML / geofencing compliance stack, deployed across staging and production. Finance degree, pricing & valuation emphasis (UGA, magna cum laude).

SKILLS

- **Backend & Infra:** Python · Django / DRF · PostgreSQL (row locking, constraints) · idempotency · Celery / Redis · REST APIs · automated testing (Django) · Nginx / Gunicorn · AWS EC2 · Git
- **Compliance & Security:** KYC / AML (Veriff) · ACH payments (Payliance) · AES-256 encryption · signed webhooks (HMAC) · geofencing & fraud detection · W-9 / 1099
- **ML & Quant:** LightGBM · probability calibration · Monte Carlo · expected-value & risk modeling

EXPERIENCE

Founder, Sole Engineer & Operator — ShareShark

Atlanta, GA / Remote · shareshark.app · May 2024 – Present

- Built and ran ShareShark end-to-end, solo — a real-money, dual-currency sweepstakes stock-prediction platform on a Django/PostgreSQL backend (accounts, ledger, payouts, KYC, fraud, and admin) with a cross-platform Vue 3 client, run in production through a year of free-to-play and a real-money soft launch, with native iOS/Android clients built for app-store submission.
- Built the regulated-money stack: ACH payouts (Payliance) with AES-256-GCM encryption and fail-closed signed webhooks, KYC (Veriff), W-9 / AML thresholds, velocity and dollar caps, and multi-signal geofencing and fraud detection.
- Designed an ML options-pricing engine (LightGBM, 167 engineered features) — calibration-first and out-of-sample (temporal-split) validated, with calibration error ~19x tighter than a Black-Scholes baseline (ECE 0.0021 vs 0.0403) — bounded by a model-free "delta-ceiling" safety layer that fails closed on missing data.
- Owned the business end-to-end, beyond the code — sourced and negotiated 12+ data / KYC / payments / infrastructure vendors, authored the payment-processor underwriting packet, and handled business banking, entity formation, and trademark / IP.

Independent Quantitative Trading — Prediction & Sports Markets

Nov 2023 – Present

- Compiled a fully tracked 12,000+ entry record at ~9% average ROI across prediction and sports markets, running positive-expected-value (+EV) and arbitrage strategies with Kelly-based risk management; built calibration, devig, and closing-line-value (CLV) tracking tools.

EDUCATION

University of Georgia — B.B.A., Finance (Area of Emphasis: Pricing & Valuation)

May 2024

- Magna Cum Laude · GPA 3.83 / 4.00 · HOPE Scholarship · President's List · Dean's List
- 2023 CFA Society Atlanta Ethics Challenge — represented UGA at Emory University, analyzing a fund-management ethics case against the CFA Institute Code & Standards of Professional Conduct and presenting the team's findings to a panel of industry judges.