CHRISTIAN MACION

Quant Researcher · Multi-Agent Research Architecture · Statistical Validation & Strategy Research

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FIT FOR: Quant Researcher · Research Engineer · QR-Rotational · Strategy Research · Risk Research

SUMMARY

Quant Researcher who builds, statistically validates, and honestly retires systematic strategies under a pre-registration-aware, multiple-testing-controlled framework. I treat false positives as enforced methodology — banking each one into a reusable research-integrity playbook — and ship an automated monthly forward-out-of-sample monitoring pipeline so the live track record is un-gameable.

I previously served as an AI Systems Engineer / Quantitative Researcher on a systematic-strategy desk (PM Evan Ferioli, 03/2026 – 06/2026 contract), where I evaluated 40+ strategy families across 5 asset classes (equity-index, crypto, energy, metals, agriculture) under a 31-gate statistical filter; built 10+ point-in-time, look-ahead-disciplined data pipelines from scratch on free public sources; and implemented the modern selection-bias stack — Deflated Sharpe Ratio, Probability of Backtest Overfitting via CSCV, Minimum Backtest Length — scipy-free in numpy.

I design with reproducibility and adversarial verification as the first-class concern, not the final step. My strategies carry a cost-routed multi-agent AI research architecture (11 agents) alongside them — used to compress expert time and to keep an honest, versioned audit trail of how the research was actually run. Available 30 hrs/wk for a QR / Research Engineer seat that values bank-the-lesson honesty over headline Sharpe.

CORE SKILLS

- Systematic Strategy Research (momentum · mean-reversion · vol carry · stat-arb)
- Pre-Registration & Multiple-Testing Control
- Deflated Sharpe Ratio (Bailey & López de Prado)
- Probability of Backtest Overfitting — CSCV
- Minimum Backtest Length (MinBTL)
- Walk-Forward · Block-Bootstrap CIs · Monte-Carlo
- Random-Timing & Regime-Shuffle Nulls
- Sharpe / Sortino / Drawdown / Profit Factor
- Point-in-Time Data & Look-Ahead Discipline
- 5-Era Stability & Sub-Period Robustness
- Cointegration & Pairs Trading
- Variance Risk Premium & Options Carry
- Regime Detection (HMM, change-point)
- Transaction-Cost Realism & Slippage Modeling
- Backtesting Engine (numpy, pandas, SQLite)
- Python (numpy / pandas / pyarrow / boto3 / matplotlib)
- SQL for Finance · AWS S3 Data Lakes
- Statistical & Mathematical Modeling
- Probability · Linear Algebra · Time-Series
- AI-Assisted Research & Literature Review
- Multi-Agent Architecture (research workflows)
- Reproducible-Build Discipline & Ledger Audits

EDUCATION

Financial Management Studies (current) — University of Mindanao (UM) (1st Semester, AY 2026–27 (enrolled))

Engineering Studies (units completed) — University of Southeastern Philippines (USeP) (2022 – 2024)

Philippine Science High School (PSHS) — PSHS System — Southern Mindanao Campus (Graduated 2022)

Certified Technical Analyst Program — Society of Technical Analysts of the Philippines (Tier-1) (Dec 2025)

TECHNICAL TOOLS

- Python (numpy / pandas / pyarrow / boto3 / matplotlib)
- SQL · SQLite · DuckDB
- AWS S3 (data lakes + frozen-spec evaluation ledger)
- Git & GitHub (versioned specs, audit trail)
- TradingView + Pine Script
- Jupyter / Google Colab
- Notion · Obsidian (research journals)
- ffmpeg / shell (data-pipeline orchestration)
- Multi-Agent AI Research Architecture (11 agents)

RELEVANT EXPERIENCE

AI Systems Engineer / Quantitative Researcher (contract) 03/2026 – 06/2026

19V Capital — Remote

- Evaluated 40+ systematic-strategy families across 5 asset classes (equity-index, crypto, energy, metals, agriculture) under a 31-gate statistical filter; advanced candidates through paper-shadow and live forward out-of-sample testing under pre-registration and frozen-spec evaluation.
- Implemented modern selection-bias statistics from scratch in numpy — Deflated Sharpe Ratio, PBO via CSCV, Minimum Backtest Length — plus block-bootstrap CIs, random-timing nulls, walk-forward, and Monte-Carlo suites; the methodological spine of every shipped number.
- Built 10+ point-in-time, look-ahead-disciplined data pipelines from scratch on free public sources ($0 budget) — byte-range subsetting, completeness guards, gap logging, and idempotent incremental pulls to produce reproducible research-grade datasets.
- Caught and documented false positives as enforced methodology — banking each into a reusable research-integrity playbook — and designed an automated monthly forward-OOS monitoring fleet (scheduled data pull → S3 sync → frozen-spec evaluation → ledger) that produces un-gameable live performance evidence.
- Designed a cost-routed multi-agent AI research architecture (11 agents + 22-module skills library) and authored an institutional operating standard plus 16 research studies / teaching workbooks adopted across the desk.

Independent Quant Researcher 01/2025 – 05/2026

Self-Directed Practice — Remote

- Designed, backtested, and statistically-validated systematic strategies on crypto and equity-index universes using Python; evaluated via Sharpe, drawdown, win-rate, and profit factor under pre-registration-aware discipline.
- Read and summarized 20+ academic and practitioner papers on momentum, mean-reversion, volatility carry, statistical arbitrage, and multi-agent AI architectures into structured one-page research notes.
- Maintained a research journal documenting hypotheses, methodology, statistical tests, and outcomes — building a personal library of structured quant knowledge that fed into a subsequent research-desk engagement.

Crypto Trading Systems Research Assistant 10/2025 – 04/2026

Ledger51 Trading Community — Davao Region, Philippines

- Supported structured analysis of crypto trading workflows: order-execution systems, trading bots, and platform mechanics — translating operational behavior into research-graded breakdowns.
- Documented execution friction and platform inconsistencies affecting trading accuracy and consistency; contributed to a structured documentation pass used for research and training purposes.

CERTIFICATIONS

Finance, Trading & Economics:

Certified Technical Analyst Program — STA Philippines (Tier-1), Certified Technical Analyst — CertifyMe, Financial Trading in Python — DataCamp, Math for Finance Professionals — DataCamp, Intermediate Python for Finance — DataCamp, Excel for Financial Planning and Analysis (FP&A) — LinkedIn, Financial Modeling and Forecasting Financial Statements — LinkedIn, Foundations of Growth Equity — Goldman Sachs, JPMorgan Chase Investment Banking Job Simulation — Forage

Mathematics, Statistics & Programming:

Getting Started with Python for Finance — LinkedIn, Python Essentials 1 — Cisco Networking Academy, SQL for Finance Professionals — LinkedIn, Understanding Data Science — DataCamp, Data Literacy — DataCamp, Introduction to Data Science — Cisco Networking Academy, Career Service Professional Eligibility — Civil Service Commission

AI, Data Science & Technology:

Introduction to AI Agents — DataCamp, AI Fundamentals — DataCamp, Artificial Intelligence Fundamentals — IBM, AI Fundamentals with IBM SkillsBuild — Cisco, Introduction to AI — Google, AI for the Modern Workforce — Ateneo de Davao University, Software Development and Design Thinking — DICT Philippines

Selected Events, Hackathons & Programs:

Galactic Problem Solver — NASA Space Apps Challenge (Zurich) — Oct 2025, BIDA META AICCELERATE 2025 — Meta & Bayan Academy — Dec 2025, UP Data Science Society — ACLE 2026 — Feb 2026, LimitlessBiz: AIM ASEAN Training — Limitless Lab — Mar 2026, Sui Builders Program Davao — Sui Foundation — Apr 2026, Speedrun Ethereum — ETHPH Mindanao — Aug 2025, Base Philippines Community Townhall — Davao — Aug 2025