JAKE SNEDKER

Quantitative Developer | Trading Systems Engineer | Research Engineering

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PROFESSIONAL SUMMARY

Five years trading full time with my own systems, and three years hand-writing every line of the MQL5 and PineScript behind them before I trusted AI with any of it. I have **passed 30+ live funded evaluations and blown them** — which is precisely why I now build falsification-first: assume the strategy is wrong and try to destroy it before it costs anything. Mechatronics engineer by training; the quantitative work is self-funded, self-taught and deliberately self-critical.

SELECTED OUTCOMES

- **Passed 30+ live funded trading evaluations**, including both phases of real prop-firm challenges. At peak held 12 Apex funded accounts simultaneously (~USD 1.2M nominal prop-firm account capital, not investor funds or personal assets)
- **All accounts were ultimately lost — every one through my own decisions.** Diagnosis: strategies insufficiently robust to a losing cluster, and position risk set too high. That diagnosis is the specification for everything I've built since
- **Processed 150,000+ optimisation results per week** (conservative figure) across a 15–20 person research programme, with Python filtering to isolate the few candidates worth pursuing
- **Built a walk-forward and Monte Carlo validation framework** to attack overfitting through rigorous out-of-sample testing — published openly

CORE COMPETENCIES

Quantitative: walk-forward optimisation, Monte Carlo trade-order randomisation, parameter-stability testing, drawdown and outlier analysis, regime awareness, overfitting detection
Trading systems: MQL5 expert advisors, PineScript strategies and indicators, MetaTrader 5 strategy tester at scale, execution and risk controls, prop-firm rule sets
Engineering: Python, FastAPI, typed DSL design, experiment artefact management, automated testing, SQL/Supabase, Docker, AWS EC2
AI: multi-agent orchestration for hypothesis generation, LLM-assisted code generation with deterministic validation gates
Domain: five years of live discretionary trading — execution, risk, drawdown psychology and the failure modes that don't appear in a backtest

FEATURED WORK

Popper — Falsification-First Research Platform

Architect & sole engineer | personal R&D | 2026 – present

- An AI research and falsification engine: **6–7 coordinated subagents** generate market hypotheses, then a statistical gauntlet attempts to destroy them. Only survivors are exported to executable PineScript and MQL5 for live testing.
- Typed strategy DSL, orchestration layer, experiment artefacts, statistical robustness and falsification components, API and automated test suite.
- Named for Karl Popper: a theory not refutable by any conceivable event is non-scientific. Most backtesting frameworks help you find a flattering equity curve; this one assumes every idea is wrong until it survives attack.
- *Personal R&D. Not a profitable strategy, a deployed product, or evidence of investment performance.*

Staged Optimisation Engine (JJC BOT V13)

Architect | MQL5 + Python | 2026

- Five-stage sequential optimiser across **18 parameter clusters and 37 fixed parameters**: foundation baselines → entry refinement → time and market context → trade management → exits and drawdown control.
- **Gates between stages abort the run when no edge is demonstrated**, and each stage is tested against the surviving system rather than in isolation — structurally preventing the stacked-parameter overfitting that kills most systems.

Quantitative Strategy Validation & Robustness Framework

Python | github.com/JakeSnedker — public

- Rolling walk-forward analysis with Monte Carlo trade-sequence randomisation to stress test robustness and drawdown risk across changing market regimes.
- Automates large-scale parameter sweeps and evaluates stability rather than peak performance — good settings must hold at 1.3, 1.5 and 1.7, not only at 1.47.

PROFESSIONAL EXPERIENCE

Full-Time Discretionary Trader — self-employed / Zen Traders Academy

Stuttgart, Germany | June 2021 – May 2026 (continuing at reduced intensity)

- Five continuous years of daily risk decisions under real financial pressure, running in parallel with every other role listed here.
- Ran my own live trading sessions a minimum of three times weekly for a community of 45–50 participants.
- Built the automation around the trading throughout — hand-written MQL5 and PineScript from late 2022, with AI assistance only from late 2025.
- Reduced to part-time in 2026 by deliberate decision: over five years the returns did not justify the opportunity cost. I would rather state that plainly than dress it up.

Project Lead — The Pip Side

Remote (Canada-based) | 2022 – November 2023

- Led a 15–20 person research programme building an automated trading system: set the test agenda, distributed work, mentored the team, analysed results, owned scope.
- 150,000+ optimisation results processed weekly; provisioned AWS EC2 for live testing.
- Held the team and a 70-person user community together through the company's closure.

Engineering Intern → Electrical Engineering Assistant — ThyssenKrupp Engineering

Perth, Australia | July 2017 – February 2018

- Observed three project cycles, identified the recurring bottleneck the incumbent engineers had normalised, and was given scope to solve it — the internship was extended so the build could be finished.
- Designed and built an Excel/VBA cable-management database **with the eventual primary user**, shaping the interface around how the work was actually done.
- **Cut a recurring process from 2–3 engineers over 5–6 weeks to one engineer over ~2 weeks — roughly 640 hours and ~85% of the effort per project** (own measurement across four projects).
- Declined a two-year contract offer to travel.

EDUCATION

Bachelor of Science, Engineering (Honours) — Mechatronic Engineering

Curtin University, Perth, Western Australia | 2011–2017

Honours thesis (Distinction): *A Navigation System for Pedicle Screw Alignment in Spinal Surgery* — intraoperative guidance combining AR visualisation, electromagnetic positioning and medical imaging.

Also: Awarded the top-1% prize, Westpac Australian Mathematics Competition | Champion team (team leader), EFY engineering unit

ADDITIONAL

Languages: English (native), German (B1 certified, conversational B2), basic Spanish and Japanese. **Authorisation:** Australian citizen, EU resident with full right to work in Germany/EU.

Career note: On parental leave March 2025 – June 2026, during which the systems above were designed and built.

Beyond work: Four off-grid vehicle conversions built and lived in (Australia, New Zealand, Canada) · summited Kilimanjaro and Kinabalu · licensed skydiver · 30+ countries · three published books and 150+ podcast episodes on trading and performance psychology.