GOLD AI

A rule-based engine that trades gold — with risk control built in.

White paper: design, 11.5 years of testing, risk management and live operation of the Gold AI trading system.

WHITE PAPER · VERSION 1.0
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GOLDAI.SITE

1.51	1,430	100%
PROFIT FACTOR	GOLD TRADES TESTED	BROKER-SIDE STOPS

01 · EXECUTIVE SUMMARY

Discipline, written in code

Gold AI is an autonomous trading system for gold (XAUUSD). It follows a fixed set of rules, sizes every trade by risk, and places a stop-loss at the broker with every order. It runs 24/7 on a dedicated server and has traded a live MT5 account since 29 September 2026.

The rules were tested on more than 11 years of minute-by-minute gold data with every trading cost included, then checked again on five earlier years the system had never seen. A second engine on the NASDAQ 100 and a small Bitcoin trend engine run alongside it, with almost no correlation to the gold engine.

1.51 Profit factor of the gold engine, 2015–2026	**2.15×** Average win is 2.15 times the average loss	**1.27** Profit factor on never-seen data, 2010–2014	**≈ 0** Correlation between the gold and NASDAQ engines
1.60 Sharpe ratio of the 3-engine portfolio	**9 / 12** Calendar years with a positive result	**0** Times the 40% kill switch was hit in 11 years	**0** Live execution errors since launch

Key findings

- **A real, repeatable edge.** Winners are on average more than twice the size of losers, so the system can be profitable while winning about 4 trades in 10.
- **It holds up out of sample.** On 2010–2014 data that was never used in development, the gold engine stayed profitable across 658 trades.
- **It survives higher costs.** With spreads 60% wider and extra slippage, all three risk profiles stayed profitable over 2015–2026.
- **Risk comes first.** Fixed risk per trade, a drawdown ladder, a daily loss lock and a kill switch protect capital before profit is considered.
- **The investor stays in control.** Funds stay in the client's own MT5 account. Gold AI gets trade access only and cannot withdraw.

02 · THE IDEA

Why a rule-based gold engine

Most traders do not lose because their ideas are bad. They lose because of how they act: moving stops, doubling after a loss, cutting winners early, or trading when tired.

Gold AI removes those human weak points. Every decision follows the same written rules, at any hour, in any mood of the market. The system does not use martingale, grid or "revenge" trading — the methods behind most blown trading accounts.

Why gold

Gold is one of the deepest and most liquid markets in the world. It moves in long, clear trends driven by interest rates, the US dollar, inflation and central-bank buying — the kind of moves a trend engine is built to capture.

Why rules

Rules can be tested. Every number in this paper comes from replaying the exact live rules on historical data. "AI reads the context — fixed rules decide."

HOW IT THINKS

Five layers between the market and your capital

01
Market data
Live candles from 5-minute to daily, synced from MT5 every cycle.

02
Trend engine
An hourly multi-timeframe model looks for a clear trend and a clean entry.

03
Cost gate
Rejects any trade where spread and costs eat too much of the expected move.

04
Risk core
Sizes the trade by risk, lower in volatile markets and after drawdowns.

05
Execution
Order and stop-loss go to the broker together. A trailing exit lets winners run.

Trade management in one line

Each trade risks a fixed share of equity (1R). Once a trade reaches +1R the stop starts to trail 1.5R behind the best price, locking in profit step by step and letting strong trends run to several R. A trade can stay open up to 200 hours, and no more than five trades are open at once.

03 · DATA AND METHOD

How the system was tested

A backtest is only as good as its honesty. Gold AI's tests were built to be strict: the exact live rules, real minute data and every cost.

ITEM	HOW IT WAS DONE
Data	Minute-by-minute gold prices (Dukascopy and HistData), Nov 2015 – Aug 2026 for development; 2010–2014 kept aside for testing
Rules	The same code and settings as the live engine — no "backtest-only" shortcuts
Costs	Broker spread of $0.25/oz plus $0.10 slippage on every trade; stress tests at $0.40 spread and $0.30 slippage
Sizing	Risk fixed at entry from the equity known at that moment; profit or loss booked on the exit day
Safety rules	Drawdown ladder, daily loss lock and the 40% kill switch all modelled
Portfolio	Gold engine plus NASDAQ 100 engine (daily) and Bitcoin trend engine at 10% size

Four levels of proof

In-sample
2015–2026, 1,430 gold trades with all costs

Out-of-sample
2010–2014, five years never used in design

Cost stress
Wider spreads and extra slippage on every trade

Live
Real MT5 account since 29 Sep 2026, published live

Research discipline

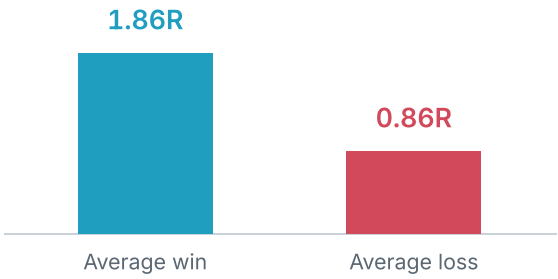
More than 30 research rounds were run. Ideas that looked good in-sample but failed on fresh data were rejected — for example a structure-based trailing stop and a wider stop buffer. Only changes that held up at the real broker cost were kept. This is why the live engine is simple: every rule has earned its place.

04 · GOLD ENGINE RESULTS

A small edge, repeated many times

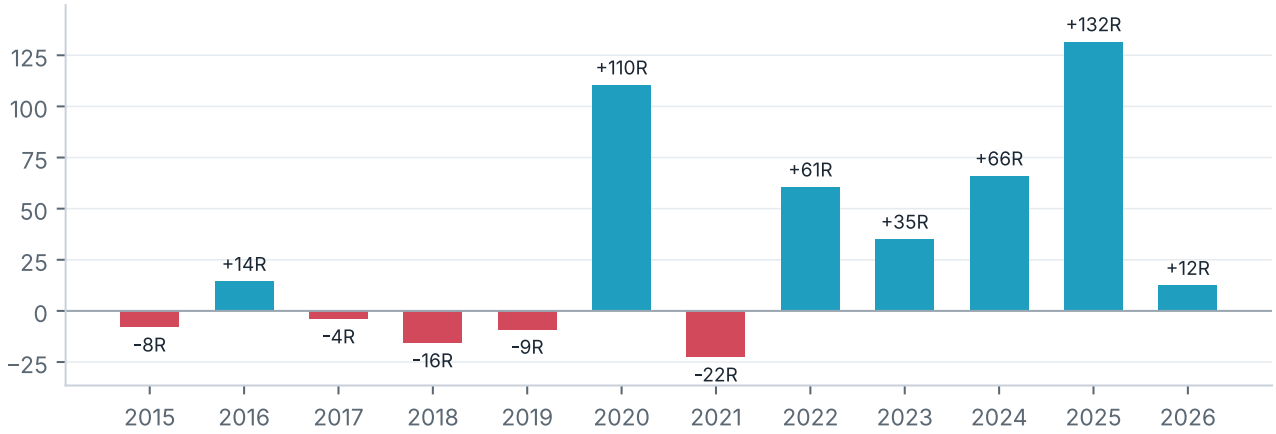
The gold engine wins about 41% of its trades, but its average win is 1.86R against an average loss of 0.86R. That asymmetry is the core of the edge.

GOLD ENGINE, 2015–2026	VALUE
Trades	1,430
Win rate	41.3%
Average win	+1.86R
Average loss	−0.86R
Profit factor	1.51
Expectancy per trade	+0.26R
Largest single win	+9.2R
Profit factor, trending years 2021–2026	1.69



Losses are cut at the stop. Winners are allowed to run with a trailing stop.

Net result in R per year (gold engine)



R = the amount risked on one trade. 2026 is January–August. The engine earns most in trending years such as 2020, 2022, 2024 and 2025, and keeps losses small in quiet years.

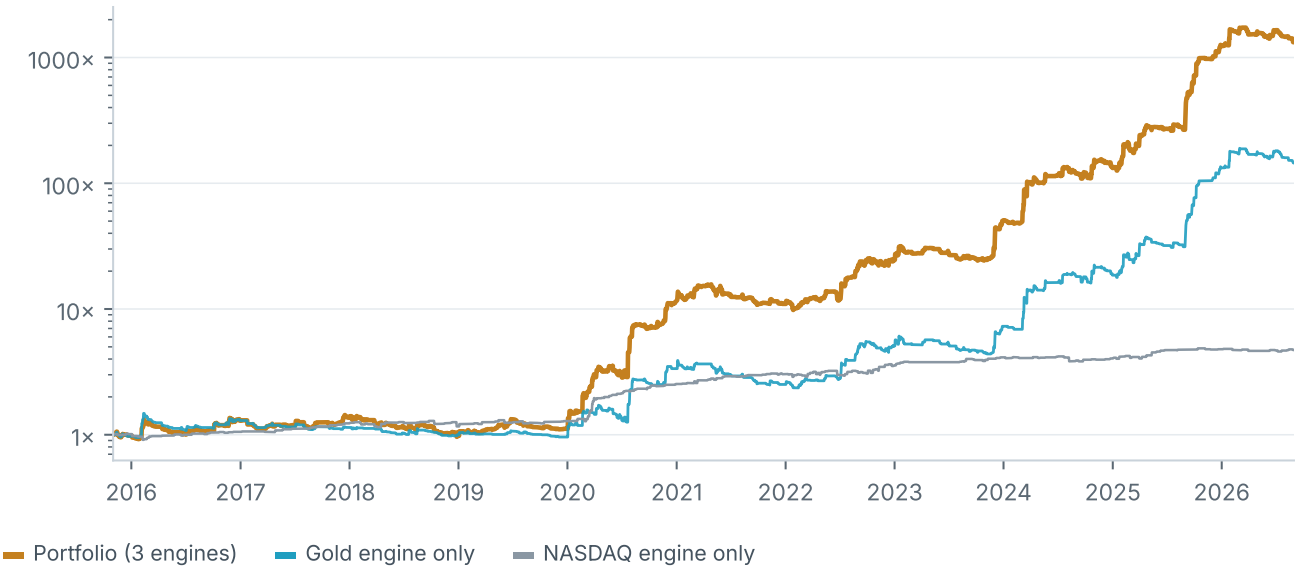
05 · PORTFOLIO

Three engines that do not move together

The gold engine is joined by two independent engines. Because they react to different markets, a quiet period in one is often a good period in another.

ENGINE	MARKET AND STYLE	CAGR	MAX DD	SHARPE
Gold engine	XAUUSD · hourly trend	58.3%	39.4%	1.30
NASDAQ engine	NASDAQ 100 · daily mean-reversion	15.4%	10.9%	1.25
Bitcoin engine	BTC · daily trend, 10% size	5.5%	5.6%	—
Portfolio	All three together	**94.2%**	37.4%	**1.60**

Growth of 1 unit, Nov 2015 – Aug 2026 (log scale)



+68%
Median full-year return

2.91
Sortino ratio

2.52
Calmar ratio

≈ 0
Gold vs NASDAQ daily correlation

Backtest of the live (Aggressive, 2% risk) settings. Two exceptional trend years — 2020 and 2025 — produced very large gains; excluding both, the compound annual return is still 37.8%.

06 · ROBUSTNESS

Tested where it could break

A strategy that only works on the data it was built on is worthless. Gold AI was pushed in three directions to see if the edge survives.

1 · Five years it had never seen (2010–2014)

Before running this test, all settings were frozen. The gold engine then traded five earlier years of minute data for the first time.

GOLD ENGINE	TRADES	PROFIT FACTOR	EXPECTANCY
Development years 2015–2026	1,430	1.51	+0.26R
Never-seen years 2010–2014	658	1.27	+0.15R

The edge was smaller in the quieter 2010–2014 market, as expected, but it stayed positive — strong evidence that the rules capture something real.

2 · Higher trading costs

All three risk profiles were re-run with costs well above the live broker's.

COST SCENARIO (2015–2026)	CONSERVATIVE	BALANCED	AGGRESSIVE
Live costs ($0.25 spread + $0.10 slip)	42.5%	62.0%	96.2%
Spread $0.40	36.8%	51.4%	73.6%
Slippage $0.30	35.8%	49.6%	69.6%
Both together	32.5%	42.8%	59.3%

Compound annual return. Even in the harshest case every profile stayed clearly profitable. To protect this, client accounts may only use brokers whose gold cost is $0.25/oz or less.

3 · Parameter checks

Neighbouring settings (stop buffer 0.5, 0.75 and 1.0 ATR, different trailing rules) were tested. Results changed smoothly rather than collapsing — a sign that the engine is not "curve-fitted" to one lucky setting.

07 · RISK MANAGEMENT

Built to protect capital first

Profit is the goal, but survival is the rule. Gold AI has several independent layers of protection.

Fixed risk per trade

Every trade risks a set share of equity (0.5%, 1% or 2% by profile), reduced automatically when markets are unusually volatile.

Stop-loss at the broker

The stop is sent with the order and lives on the broker's server. If the internet or the server goes down, every trade is still protected.

Drawdown ladder

After a 10% fall from the peak, trade size drops to 75%; after 20%, to 50%. Size returns to normal as the account recovers.

Daily loss lock

If losses in one day reach the limit, the engine stops opening new trades until the next day.

Kill switch

If an account falls 25%, 30% or 40% (by profile) from its peak, copying stops automatically. In 11 years of testing it was never hit.

Exposure limits

At most five positions open at once and a 200-hour maximum hold. A reopen guard handles the daily broker rollover.

Cost gate

Trades are skipped when the spread is too wide, and client brokers must qualify at $0.25/oz or less.

Dead-man switch

Every service reports a heartbeat. If anything goes silent, an alert is sent at once.

Client safety

- Money stays in the client's own MT5 account, in the client's name, at a regulated broker.
- Gold AI receives trade-only access. It cannot withdraw or move funds.
- The client can see every trade in their own MT5 terminal and in the Gold AI portal.

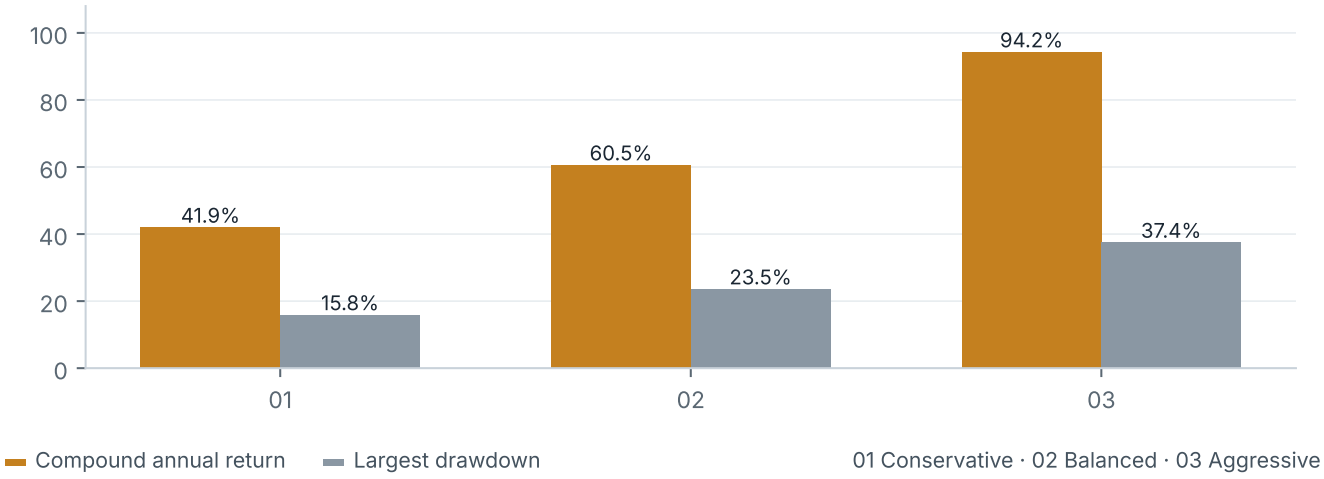
08 · INVESTMENT PROFILES

One engine, three levels of risk

Every account follows the same signals. Only the size of each gold trade and the safety limits change, so investors can choose the balance of growth and calm that suits them.

	01 · CONSERVATIVE	02 · BALANCED	03 · AGGRESSIVE
Risk per gold trade	0.5%	1.0%	2.0%
Typical year (backtest range)	~20–35%	~25–45%	~30–65%
Compound annual return 2015–2026	41.9%	60.5%	94.2%
Sharpe ratio	2.01	1.83	1.60
Largest drawdown	15.8%	23.5%	37.4%
Kill switch	25%	30%	40%
Minimum equity	$10,000	$5,000	$5,000

Return and drawdown by profile



The Conservative profile has the best return per unit of risk (Sharpe 2.01). In a Monte Carlo simulation its chance of a losing year was about 3%.

09 · LIVE OPERATION

Running live, in the open

Since 29 September 2026 Gold AI has traded a live MT5 account on a dedicated server. Its state is published on goldai.site in real time.

24/7
Dedicated server, monitored around the clock

10 / 10
Services online, each with a heartbeat

0
Execution errors since launch

100%
Trades with a stop at the broker

Transparency on goldai.site

- Live engine status, open positions shown on a risk scale, and the hourly decision log.
- Every closed trade published with its real entry, stop and exit prices.
- Investor portal with equity history, closed trades and account health for each connected account.

Technology

Python engine with PostgreSQL, MetaTrader 5 execution, automatic backups (GitHub and off-site), Telegram alerts and a weekly AI review of performance. A self-check "shadow" layer paper-trades the engine's own signals to track its form.

Roadmap

NEXT STEP	PURPOSE
Verified public track record	Third-party verified live statistics (Myfxbook / FXBlue)
Machine-learning trade filter	Now running in shadow mode; adopted only if it proves itself live
Copy-trading at scale	Multi-account copier with per-account risk profiles and cost checks
Market intelligence	Daily gold fundamentals report alongside the engine

10 · CONCLUSION

A disciplined, tested and transparent engine

Gold AI turns a clear trading idea — follow strong gold trends, cut losses fast, let winners run — into a fully automated system with risk control at every step.

- A positive edge over 1,430 gold trades with all costs included (profit factor 1.51).
- Confirmed on five years of data it had never seen, and under much higher trading costs.
- A three-engine portfolio with near-zero correlation and a Sharpe ratio of 1.60.
- Multiple layers of protection, and client money that never leaves the client's own account.
- Live since September 2026, with every closed trade published.

Important information

Most results in this paper come from backtests: the live rules replayed on historical data. Backtests are hypothetical and have limits — they cannot fully capture real slippage, broker differences or future market conditions. The live record is still short. Returns are uneven: the largest gains came in strong trend years, about half of all months were positive, and the system has had deep drawdowns (worst year −28.9% in 2018 at the Aggressive setting). Results at a client's broker can differ. Trading gold, indices and crypto with leverage carries a high risk of loss. Past performance does not guarantee future results. This paper is for information only and is not investment advice or an offer to invest.

Contact · goldai.site · portal.goldai.site · support@goldai.site