

Hans_Schulte_Bio_Architecture

Autonomous AI × Quantitative Execution Specialist

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GitHub <https://github.com/PastSmartLink> | Location Utzigen, Switzerland

30+ years proprietary capital × live AI-augmented crypto execution since 2019

Battle-tested engines (WRAITH v4 & APEX) running 24/7 with real money on BTC, ETH, SOL perpetuals.

Background and Early vision of future finance publicly documented in 2006 by European Commission CORDIS and 2009 Carbon Credits International startup.

→ <https://cordis.europa.eu/article/id/98586-the-next-arena-for-innovation-at-httpwwwlivecitcom>

→ https://www.sec.gov/Archives/edgar/data/1443611/000119983508000541/carbon_credits-s1.htm

Core Expertise

- **Algorithmic Trading & Liquidity**
Order-flow imbalance engines, volatility-adaptive Kelly-Lite sizing, smart routing, maker-first execution on perpetual futures
- **Generative AI in Production**
Google Gemini-powered NeuralCouncil – autonomously tightens or relaxes entry thresholds based on recent PnL
- **Resilient Systems Architecture**
asyncio low-latency cores, hard external stops, flash-crash guards, automatic equity kill-switches
- **Quantitative Research**
30+ years market microstructure across petrochemicals → equities → digital assets
- **DevOps & Governance**
Cloud-native, SOC 2-aligned monitoring, full audit trails, real-capital PnL tracking

Professional Experience

Proprietary Quantitative Researcher & Trader 1990s – Present

- Managed private risk capital through multiple decades and asset classes
- Since 2017 full focus on digital assets and perpetual futures
- Developed “extreme ownership” risk framework now embedded in all automated systems

Independent AI Systems Architect & Lead Developer 2019 – Present**

- Designed, coded and run WRAITH v4 / APEX – fully autonomous, AI-enhanced execution frameworks live 24/7 on BTC, ETH, SOL
- First to productionise Generative AI as active risk co-pilot (NeuralCouncil)
- Prototyped multi-venue smart routing and anti-crash logic proven across 2022–2025 cycles

Flagship Live Systems (2023 – 2025)

WRAITH V4 / APEX – Unified Autonomous Execution Platform

Structure-first, AI-calibrated anomaly trading & liquidity provision

Asset	Build	Risk/Trade	Stop Logic	Key Trait
SOL/USDT	WRAITH v4 FERRARI	1.5 %	10× volatility	Aggressive high-liquidity scaling
BTC/USDT	APEX v8.1	2.5 %	3× volatility	Ultra-strict stability filter
ETH/USDT	VOID v4	2.0 %	8× volatility	Flash-crash guard + tight spreads

Public repo (sanitised architecture + plots) 99.9% is Private

→ https://github.com/PastSmartLink/CodeRed_Sentinel_Public_Core

Selected Technical Highlights

NeuralCouncil – Self-calibrating AI risk layer

if recent_win_rate > 0.60:

trigger = 90.0 + (recent_win_rate - 0.60) * 50 *# relax*

else:

trigger = 95.0 + (0.60 - recent_win_rate) * 100 *# tighten*

Settings.PERCENTILE_TRIGGER = max(90.0, min(99.9, trigger))

Hard equity kill-switch (SOC 2 grade)

if equity < start_capital * KILLSWITCH_PCT:

logger.critical(f"FATAL KILLSWITCH @ \${equity:,.0f}")

sys.exit(1)

Volatility-scaled Kelly-Lite sizing (SOL example)

risk_usd = equity * 0.015

stop_dist = max(mid_price * 0.012, volatility * mid_price * 10.0)

```
size    = risk_usd / stop_dist
```

```
size    = min(size, MAX_NOTIONAL / mid_price)
```

```
size    = max(0.1, round(size, 4))
```

ETH flash-crash guard

```
if (high_mark - price) / high_mark > 0.03: # 3 % drop in <2 min
```

```
    is_crashing = True
```

```
    logger.warning("FLASH-CRASH DETECTED – PAUSING EXECUTION")
```

Skills Snapshot

Domain	Level	Key Tools & Methods
Programming	Expert	Python (asyncio), NumPy/Pandas, C++ extensions
AI / LLM	Advanced	Google Gemini, LangChain, semantic reasoning
Trading Infra	Expert	CCXT, Binance/Bybit/Deribit APIs, WebSockets
Quant Models	Expert	OFI, Kelly variants, GARCH, volatility clustering
DevOps	Advanced	Docker, AWS/EC2, Prometheus, Git workflows

Engagement Model-Consulting & Retainer

- **Licensing:** WRAITH / VOID / APEX System Licensing (Limited Availability).
 - **Consulting:** Institutional Architecture & Risk Advisory.
 - **Availability:** Independent. Not seeking full-time employment.
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References, full production logs, and live performance data available under NDA.

All systems remain 100 % privately developed, owned, and continuously deployed with real capital.

— Hans Johannes Schulte | 29 November 2025