YahooYuan Full-Stack Engineer & Systems Specialist

Open to Opportunities (Full-time / Remote / Consultant)

10 years in mission-critical networks & systems · Versatile deployment (Rapid Cloud / Hardened VPS / Bare-Metal) · Low-latency quant engines & pragmatic AI enablement

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Portfolio: yahooyuan.pages.dev **Timezone:** UTC+8 (Flexible across US, EU & APAC schedules)

⚡ CORE COMPETENCIES & STACK

💻 Full-Stack Web Engineering

End-to-end capability from business logic abstraction and database schema design to responsive modern frontend/backend implementation. Clean, self-documenting code with comprehensive handoff guides.

Next.js / React | TypeScript | Node.js | FastAPI / Python | Tailwind CSS | PostgreSQL | REST / WebSocket

🚀 Versatile Infrastructure (Cloud · Hardened VPS · Bare-Metal)

Full-spectrum ops: rapid cloud containerization (Docker/CI-CD); high-defense VPS performance tuning (Hetzner/DO, Fail2ban, iptables rate limiting, automated SSL); on-premise physical datacenter cabling and Layer-3 switch VLAN isolation.

Rapid Cloud CI/CD | Hardened High-Defense VPS | Bare-Metal Datacenter | Nginx / Automated SSL | Docker

📈 Quantitative Trading & Algorithmic Engines (C++ / MT5 / CTA)

Low-latency trading system architecture. Proficient in C++ and MQL5 building automated execution bridges for MetaTrader 5 (MT5); CTA trend-following and adaptive grid strategies; Python-driven tick/bar data backtesting and real-time reconciliation.

C++ / MQL5 (MT5) | CTA Strategies | Python (Pandas/NumPy) | WebSocket L2 | Redis Mirroring | TimescaleDB

🤖 AI FDE & Telecommunications / Surveillance Engineering

Pragmatic FDE delivery: turn-key enterprise AI solutions (local RAG knowledge bases, Dify workflow automation, OCR/document pipelines); extensive background in campus-scale smart surveillance networks (IPC/NVR streaming) and secure video telepresence.

Enterprise RAG | Dify Workflows | Smart Surveillance (NVR/IPC) | Telepresence Systems

🚀 FEATURED ENGINEERING PROJECTS

Commercial Full-Stack Web Application, Legacy Modernization & Multi-Tier Deployment

2025.01 — Present

Full-Stack Technical Consultant / Lead Engineer | Tech Stack: Next.js, React, TypeScript, FastAPI, PostgreSQL, Docker, Nginx, UFW, Dify/Ollama

- **End-to-End Delivery & Modernization:** Delivered multi-language responsive websites and internal dashboards for overseas and startup clients; modernized legacy monolithic websites into headless architectures, boosting initial LCP speed by 40%+ with automated CI/CD pipelines.
- **Three-Tier Infrastructure Delivery (Cloud / Hardened VPS / On-Premise):** Engineered hardened server environments on overseas high-performance VPS nodes (Hetzner/DO) with automated Fail2ban defense, iptables rate limiting, and Nginx reverse caching—cutting server costs by 80% while fortifying resilience against external attacks.
- **Pragmatic AI Business Tooling:** Deployed local RAG knowledge bases and automated document classification pipelines, optimizing cross-departmental information turnaround by 60%+.

Distributed Event-Driven Algorithmic Trading Engine in C++ / MT5

2024 — Present

System Architect & Lead Developer | Tech Stack: C++, MQL5 (MT5), Python, TimescaleDB, Redis, ZeroMQ / WebSocket, Docker

- **Sub-Millisecond Order Routing:** Engineered asynchronous execution modules using **C++ and MQL5** interfaced directly with the **MetaTrader 5 (MT5)** API, cutting execution latency to sub-millisecond levels and minimizing slippage on fast market movements.
- **CTA Strategy R&D and Dual-Layer Verification:** Developed multi-asset **CTA strategies (trend-breakout, moving average envelopes, adaptive grids)**. Leveraged Python for tick-level backtesting and parameter sensitivity stress testing, with strict deterministic live execution in C++/MQL5.
- **Hardened Risk Controls (Anti-Blowout):** Separated trading signals from risk execution via a high-priority risk daemon. Built-in hard stop-losses, dynamic maximum daily drawdown circuit breakers, and Cancel-on-Disconnect safety logic.
- **State Reconciliation & Self-Healing:** Leveraged Redis for microsecond order book mirroring, streaming transactional history to TimescaleDB with automated double-entry reconciliation against broker accounts.

💼 PROFESSIONAL EXPERIENCE

Full-Stack Engineer / Technical Consultant · Freelance & Contracting — 2025.01 — Present

- Specializing in end-to-end full-stack web applications, versatile server operations (Cloud/VPS/Bare-Metal), MT5/C++ quantitative systems, and pragmatic enterprise AI solutions.
- Committed to strict engineering discipline: daily atomic Git commits, transparent milestone progress, and complete handover documentation.

Communications & Systems Infrastructure Officer · Mission-Critical Unit (Declassified) — 2016.07 — 2025.01 (8.5 Years)

- **Large-Scale Information Systems Engineering:** Participated in modular requirements analysis, core logic development, and cross-platform adaptation for mission-critical command and dispatch systems.
- **Field Deployment, Integration & Joint Commissioning:** Directed full-stack hardware/software integration and standard operating procedure (SOP) formulation, resolving legacy protocol and network compatibility hurdles.
- **Campus-Wide Smart Surveillance Network Architecture:** Led deployment of digital high-definition IP camera networks, network topology design, Layer-3 switch VLAN segmentations, and high-throughput NVR storage arrays ensuring 24/7 uninterrupted monitoring.
- **Secure Telepresence & Multi-Point Video Conferencing:** Managed high-security video command conferencing systems and digital audio suites; spearheaded real-time fault-tolerant line switching across distributed command centers with zero downtime during critical national tasks.
- **Datacenter Infrastructure & High-Availability Operations:** Maintained core server rooms, structured cabling, and resilient routing networks; executed unannounced disaster recovery drills, ensuring 8.5 consecutive years with zero major security incidents.

🎓 EDUCATION

PLA Rocket Force University of Engineering · B.Eng. in Command Information Systems Engineering — 2012.09 — 2016.07

Foundational coursework: Computer Networks, Data Structures & Algorithms, Operating Systems, Distributed Systems, Telecommunications.

🤝 Engagement & Working Principles

- **Flexible Collaboration:** Open to full-time roles, long-term remote contracting (20–40 hours/week), or milestone-based project deliveries.
- **Professional Integrity:** Clean Git commits, active milestone communication, NDA adherence, and reliable long-term support.