John Amos Tan

Software Engineer | AI Products and Quantitative Systems

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PROFESSIONAL SUMMARY

Software engineer with experience taking systems from prototype to production across AI products, automated trading, and embedded control. Founding engineer for two products built in a two-person team. Sole developer of PRAI Systems, an independent studio spanning AI integration, business workflows, and market-data applications.

PROFESSIONAL EXPERIENCE

AI StackWorks

Founding Engineer | 2026 - Present

- Co-built an AI-assisted software-delivery platform on a two-person team, owning end-to-end engineering implementation.
- Built Timeline and initial Mission Control versions; implemented redispatch and GitHub connections. Used AI agents with guardrails and review against product requirements.

CrewCentral

Founding Engineer | 2026 - Present

- Co-built a workforce-management platform used by approximately 10 businesses, with end-to-end engineering responsibility.
- Delivered labor management, training and development, shift swaps, and ChatGPT plugins.

QuantM Alpha

Quantitative Developer | 2025 - Present

- Architected a Bybit grid trading engine with WebSocket market data, dynamic risk limits, position sizing, and inventory rebalancing.
- Built a digital-asset risk framework and deployed trading systems on Linux with logging and monitoring.

Discernere Technologies

Quantitative Developer | 2021 - 2025

- Built a Dash/Plotly dashboard used daily by the trading team for backtesting, strategy evaluation, and risk monitoring.
- Integrated forecasting models into signal-generation pipelines; built reusable Python libraries, PostgreSQL queries, and REST APIs.

Advanced Energy

Software Design Engineer | 2017 - 2022

- Developed C firmware for power supplies and battery backup systems, alongside Python test automation, debugging interfaces, and hardware-in-the-loop tools.

AI StackWorks, CrewCentral, and QuantM Alpha are concurrent roles under the same employer.

PROJECTS

PRAI Systems

Personal product studio | Sole developer

- **JC Lucas ERPNext (staging):** Extended ERPNext with versioned business workflows and built an internal authenticated, permission-aware AI bridge. Writes require confirmation and the signed-in user's permissions. Docker and DigitalOcean deployment; Cloudflare domain management.
- **Screen (private):** Built a Bybit market archive and research application spanning collection, validation, PostgreSQL and Cloudflare D1 storage, charts, search, export, synchronization, tests, and deployment.
- **Lago (public):** Built a personal-finance app for savings goals, funding history, assets, liabilities, and net-worth tracking using Next.js, TypeScript, Django REST Framework, and PostgreSQL, with plant-based progress visualization. lago.praisystems.com
- **Beens (public):** Built a coffee-journaling and discovery project. beens.praisystems.com

TECHNICAL SKILLS

Software and data: Python, C, SQL, PostgreSQL, Cloudflare D1, Flask, Dash/Plotly, Pandas, NumPy, Vue.js, Expo.
AI and deployment: Codex, OpenClaw, Hermes agents, TensorFlow, scikit-learn, ERPNext, Git, Linux, Azure VMs, DigitalOcean, Docker, Cloudflare.
Embedded: MCU/DSP firmware, PMBus, CAN bus, Modbus, hardware-in-the-loop testing.

RESEARCH EXPERIENCE

De La Salle University

Research Assistant | 2020 - 2021

Designed and prototyped a field-oriented-control electronic speed controller using an Infineon reference design, from PCB layout and assembly through firmware debugging and testing.

Consultant | 2017 - 2019

Built a modified Pixhawk-based multirotor flight controller for Raspberry Pi integration, including PCB design, assembly, firmware flashing, and system testing.

EDUCATION

Mapúa University | Postgraduate Diploma in Power Electronics | 2016 - 2017
De La Salle University | BS Electronics and Communications Engineering | 2011 - 2016

Public portfolio résumé · November 2026