

Pengyi Peng

Software Engineer | AI Agent Engineer | Research Engineer
Shenzhen, China | pengpengyi92@gmail.com | +86 189 2814 9960
github.com/pengpengyi92 | linkedin.com/in/pengyi-peng-625511253
pengyicv.pages.dev | pengyi-present-os-zh.pages.dev

Summary

Software engineer focused on AI-agent and research systems, with an MSc in Complex Systems Modelling from KCL's Department of Mathematics, quantitative-research experience, and four upstream-merged pull requests across LightRAG, NautilusTrader, and WeKnora. Builds tested workflows and product interfaces around explicit state, evidence, failure boundaries, and Human approval gates.

Engineering and Open Source

Open-Source Engineering

Python / Rust / Go, 2026

- Delivered scoped, merged fixes for LightRAG query-boundary validation, WeKnora archived-page statistics, and NautilusTrader Rust test runtime; added focused regression coverage and preserved existing behavioral contracts.
- Completed a multi-round LightRAG review-and-repair cycle, hardening token-limit truncation handling across provider adapters and extraction pipelines; converted maintainer feedback into explicit failure semantics, regression tests, and broader verification before merge.

AI-Native Agent and Workflow Systems

Independent Engineering, 2026

- Built stateful workflow prototypes in Python and JavaScript/TypeScript using versioned schemas, deterministic state machines, append-only audit traces, Human approval gates, regression tests, and Git-based release histories.
- Implemented a CV release control plane that binds target snapshots, evidence maps, independent audits, four TeX/PDF surfaces, artifact hashes, and downstream handoffs; its local production-mode build and regression suite pass.
- Shipped Next.js interfaces on Cloudflare Pages and separated private evidence from public-safe presentation and immutable release artifacts.

Quantitative Research Engineering

Independent Reproduction, 2026

- Reorganized futures and market-microstructure work into clearer data, feature, signal, backtest, evaluation, test, and documentation boundaries; reproduced ATR, RSI, and term-structure signals, L1 microstructure features, and a simplified ASQ model in Python, pandas, and NumPy under explicit assumptions.

Professional Experience

Ping An Bank, Shenzhen Branch

Jul 2025 – Present

Management Trainee — Corporate Banking / Retail Banking / Operations

- Supported credit and business-material workflows across industry sectors; applied AI-assisted retrieval, organization, and draft preparation while manually verifying key data, business definitions, and disclosure boundaries.
- Built practical domain knowledge in transaction banking, settlement, cash management, credit processes, and cross-functional execution; ranked in the top 10% in performance reviews.

CITIC Securities

Feb 2025 – Mar 2025

Off-cycle Management Trainee Intern

- Compared quantitative private-fund products and strategies and supported manager communication and client roadshows.

Education and Quantitative Evidence

King's College London — MSc Complex Systems Modelling (Department of Mathematics)

Sep 2022 – Nov 2024

University of Reading / NUIST — BSc Mathematics and Applied Mathematics

Sep 2018 – Jun 2022

First-Class Honours; top 10% of the programme

WorldQuant International Quant Championship 2024

Global 232 / 34,142; Top 0.7%; UK 5

WorldQuant MAPC 2024

Global 11 / 850; UK 1

Technical Skills

Programming: Python, JavaScript/TypeScript, HTML/CSS; scoped, merged contributions in Rust and Go

Engineering: Git/GitHub, Linux/CLI, API integration, state machines, schemas, testing, debugging, CI workflows, technical documentation, Next.js, Cloudflare Pages

AI and Data: LLM/Agent workflows, RAG concepts, human-in-the-loop evaluation, pandas, NumPy, research backtesting

Languages: Mandarin Chinese (native), English (IELTS 7.0), Cantonese