



Jia Huang 黄佳

AI Researcher · Author · Enterprise Architect

Affiliation A*STAR, Singapore

Languages English and Mandarin

Web kage-ai.com · adpsagent.com · agentpatterns.substack.com

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Profile

Jia Huang is an AI researcher at A*STAR in Singapore and the author of *Designing AI Agents* (Manning). Earlier in his career, he spent more than a decade at Accenture as an SAP enterprise architect, working on multinational enterprise systems.

His current work asks how agentic systems should be divided, constrained and observed before they are trusted with real work. He developed a two-axis design map that combines seven agent functions — perception, memory, reasoning, action, reflection, collaboration and governance — with six execution topologies. The map is used throughout his Manning book and the related paper *A Two-Axis Framework for Designing AI Agents* (arXiv:2605.13850).

Current Work

- | | |
|---|--|
| <ul style="list-style-type: none">• Agent architecture
Reusable patterns for memory, tool use, reasoning, reflection and multi-agent work. | <ul style="list-style-type: none">• Governance in the runtime
Scoped permissions, approval gates, observable execution and staged autonomy. |
| <ul style="list-style-type: none">• Long-running reliability
Progress records, checkpoints, failure journals and recovery paths. | <ul style="list-style-type: none">• Enterprise translation
Connecting engineering decisions with product constraints and risk ownership. |

Governance in Practice

The governance chapter of *Designing AI Agents* develops four implementation patterns: **Blast Radius Control**, **Approval Gate**, **Observability Harness** and **Progressive Commitment**, guided by the principle of **Least Agency**.

Each pattern identifies a decision that has to show up in the running system: what an agent may see, which actions require approval, what evidence is retained, and when greater autonomy has been earned. This implementation-level view connects application controls with broader questions of organizational governance, risk ownership and operating models.

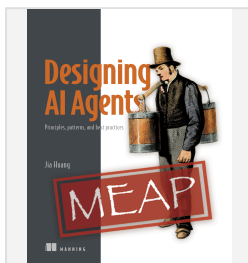
Advisory Focus

Jia advises on agent architecture, implementation patterns, long-running reliability and the connection between application controls and enterprise governance, drawing on large-scale programmes in Singapore and China.

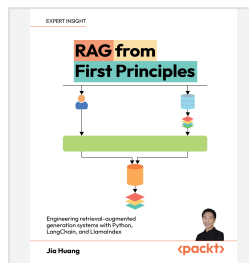
Experience

2020 – present	AI Researcher, A*STAR · Research and engineering on agentic AI, enterprise knowledge systems and evaluation.
~2010 – 2020	SAP Enterprise Architect, Accenture · Architecture and delivery across multinational enterprise programmes.
Books & teaching	Author of books on agents, retrieval systems and applied AI; author and instructor on Geek Time, reaching more than 100,000 engineers.
Enterprise work	Recent engagements include agent architecture for a global payments company, AI-for-development strategy for a leading telecommunications company, and technical advisory and training for a multinational enterprise technology company.
Community	Co-founder, Agent Design Patterns Society (ADPS) · A four-founder, practitioner-led effort to develop and publish a shared language for agent design.

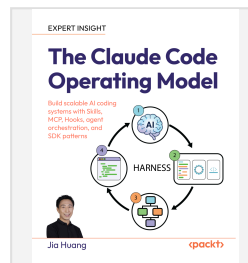
Selected Publications



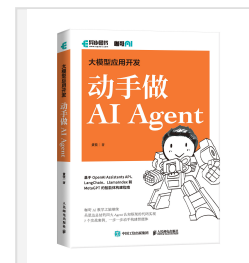
Designing AI Agents
Manning · MEAP 2026
Agent architecture and design patterns



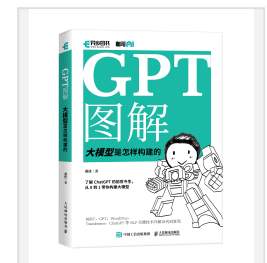
RAG from First Principles
Packt · 2026
Retrieval system design



Claude Code Engineering
Packt · 2026
Engineering with coding agents



Building AI Agent
Posts & Telecom Press · 2024
Chinese · 30,000 readers



GPT Illustrated
Posts & Telecom Press · 2023
Chinese · 20,000 readers

Agent Design Patterns Society

Jia co-founded ADPS with three other practitioners. The society publishes a bilingual catalogue of agent design patterns, short public whitepapers and longer technical references. Its purpose is practical: give architects, developers and reviewers a stable vocabulary for discussing design choices, trade-offs and failure modes. adpsagent.com

Contact

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Personal site · kage-ai.com
Society site · adpsagent.com
Substack · agentpatterns.substack.com
Manning · manning.com/books/designing-ai-agents
Paper · arxiv.org/abs/2605.13850