

Charles Tsoi

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SOLUTIONS ARCHITECTURE & TECHNICAL PRODUCT STRATEGY

Enterprise Integration | API Strategy | Digital Transformation

Technical Solutions Lead with 12+ years of experience bridging the gap between business strategy and engineering execution for Tier-1 global organizations (**Apple, Airport Authority HK, HKJC**). Expert in designing scalable integrations for **Mobile, Web, and AI Agents**.

Proven ability to lead technical feasibility studies, define **API contracts**, and manage complex architectural trade-offs (REST vs. Event-Driven). Fluent in **English, Cantonese, and Mandarin**, with a track record of enabling client success in the APAC region.

TECHNICAL SKILLS

- **Architecture & Integration:** API Design (REST/JSON), Event-Driven Architecture (Pub/Sub), Microservices, Serverless (Cloud Functions), System Integration (SAP Hybris, PSS).
- **Data & Messaging:** Solace (Event Mesh), SQL, Generative AI (LLM Agents), Data Visualization.
- **Methodologies:** Agile/Scrum, SDLC, CI/CD Pipelines, Vendor Technical Evaluation.
- **Tools:** Python, Tableau, JIRA, Confluence, Splunk, Postman (API Testing).

PROFESSIONAL EXPERIENCE

AIRPORT AUTHORITY HONG KONG | Hong Kong

Project Manager | March 2025 – Present

Leading the architectural design and deployment of Enterprise AI Agents for critical infrastructure.

- **AI Agent Architecture:** Architected and deployed **LLM-based agents** for internal report automation. Defined the integration patterns between the LLM core and internal databases, reducing manual query time by **80%**.
- **Vendor Technical Due Diligence:** Conducted deep-dive architectural assessments of Microsoft Ecosystem vendors. Evaluated API capabilities, security protocols, and scalability limits to ensure alignment with enterprise standards.
- **System Integration:** Leading the end-to-end technical delivery of a new Insurance System, managing data migration strategies from legacy mainframes to modern cloud-based workflows.

APPLE | Hong Kong

Engineering Project Manager (Specialized Consultant) | Oct 2022 – Sept 2024

Managed technical delivery for iWork backend infrastructure and Genmoji features.

- **Serverless Migration Strategy:** Partnered with Engineering Leads to transition the **iWork** backend to a **Serverless architecture**. Facilitated architectural reviews and dependency mapping, resulting in improved auto-scaling capabilities and reduced latency.
- **API Dependency Management:** Acted as the primary technical unblocker for remote engineering teams. Proactively identified API dependency risks between CoreML, UI Engineering, and QA teams, ensuring on-time delivery for WWDC releases.
- **Data-Driven Optimization:** Utilized statistical analysis of server logs and defect rates to optimize release schedules for Numbers (Server/Web).

ACCENTURE | Hong Kong

Business & Integration Architecture Specialist | Aug 2021 – Sept 2022

Focused on Mobile Architecture and API definitions for enterprise clients.

- **API Contract Definition:** Translated vague business requirements into executable **technical user stories** and defined strict **API contracts** (Swagger) for developers, reducing integration rework by 20%.
- **Mobile Architecture Transformation:** Shifted two mobile development squads from a "feature factory" model to a value-driven architectural approach, improving sprint velocity and code quality.

THE HONG KONG JOCKEY CLUB | Hong Kong

IT Solutions Analyst (Horse Racing) | May 2019 – July 2021

Technical lead for high-frequency betting systems and messaging architecture.

- **Event-Driven Architecture (Solace):** Collaborated with architects to design data flows using **Solace Event Mesh**. Ensured real-time odds updates and data integrity for high-concurrency betting transactions (Pub/Sub model).
- **System Sizing & Feasibility:** Conducted technical feasibility studies for high-volume hardware/software solutions. Analyzed trade-offs between latency and throughput for critical betting APIs.
- **Security Compliance:** Defined technical specifications for Critical Information Dissemination APIs, implementing strict security key protocols for zero-downtime compliance.

A.S. WATSON GROUP | Hong Kong

Senior Business Analyst (eLab) | Oct 2018 – May 2019

Key technical contributor to the launch of Watsons Vietnam (watsons.vn).

- **E-Commerce Platform Launch:** Led the technical rollout of the **Watsons Vietnam** flagship e-commerce site (watsons.vn) and mobile app.
- **Release Management:** Acted as the technical gatekeeper for the production environment, coordinating deployments across Asia-Pacific teams to ensure site reliability during high-traffic campaigns.

CATHAY PACIFIC AIRWAYS | Hong Kong

Product Owner / Assistant Digital Manager | Nov 2012 – Sept 2018

- **Mobile App Integration:** Led the development of the Cathay Pacific Mobile App. Defined XML/JSON data structures to integrate the mobile frontend with legacy **Passenger Service Systems (PSS)**.
- **Legacy Modernization:** Spearheaded the "NotiFLY" revamp, migrating a legacy notification system to a modern messaging architecture to improve passenger communication reliability.

EDUCATION & CERTIFICATIONS

The Chinese University of Hong Kong (CUHK)

Master of Science in Information & Technology Management (MScITM) | Expected Q1 2027

- *Focus: Data Science, AI, System Design, Strategic IT Management.*

Lingnan University

Master & Bachelor of Philosophy

Certifications:

- **Solace Certified Event Driven Architecture Practitioner** (Relevant for Messaging/WhatsApp API)
- **Project Management Professional (PMP)**
- **Professional Scrum Master (PSM I) & Product Owner (PSPO I)**