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THOUGHT LEADERSHIP BRIEF

Hong Kong's AI Talent Challenge: Evidence of Structural Mismatches in Hong Kong

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KEY POINTS

- Hong Kong's AI workforce has expanded rapidly over the past decade, reaching approximately 23,600 professionals by the end of 2024, with employment rates remaining close to 90%.
- The primary challenge facing Hong Kong is not a shortage of AI talent, but structural mismatches between talent supply and industry demand.
- Three mismatches are particularly evident: experience mismatch, skills mismatch, and ecosystem mismatch.
- Future AI policy should focus not only on expanding talent supply, but also on strengthening applied capabilities and connecting AI development with industry adoption.

ISSUE

Artificial Intelligence (AI) has become a strategic priority for governments and businesses worldwide. In Hong Kong, AI has moved to the center of the city's innovation and economic development agenda. Recent policy initiatives, including The Chief Executive's 2025 Policy Address, the Hong Kong Innovation and Technology Development Blueprint, and The 2025–26 Budget, have emphasized AI development through investments in computing infrastructure, research capacity, talent attraction, and industry adoption.

As Hong Kong continues to expand its AI ecosystem, an important policy question emerges: *does the available AI talent supply match arises*: does the available supply of AI talent meet *the needs of employers seeking to adopt and deploy AI technologies?*

The Center for Business and Social Analytics (CBSA) at the Hong Kong University of Science and Technology recently conducted a comprehensive study of Hong Kong's AI talent market. The study combines a decade-long dataset of AI professionals with a market-wide snapshot of recent AI hiring demand. The evidence suggests that Hong Kong's challenge is not primarily a shortage of AI talent. Instead, the market is characterized by several structural mismatches between available talent and employer demand.

Understanding these mismatches is critical for policymakers, educators, and business leaders seeking to accelerate AI adoption and maximize the economic benefits of AI investment.

Box 1. Research Design: Comparing AI Talent Supply and Industry Demand

To understand whether Hong Kong's AI workforce aligns with employer needs, the study examines both the supply and demand sides of the AI labor market in Hong Kong.

AI Talent Supply

The supply-side analysis is based on a decade-long workforce dataset covering more than 25,000 AI professionals with work experience in Hong Kong between 2015 and 2025. AI professionals are identified using skill-based definition, including capabilities such as machine learning, deep learning, data science, and data engineering. The dataset is used to examine the size, composition, mobility, educational background, and career progression of Hong Kong's AI workforce.

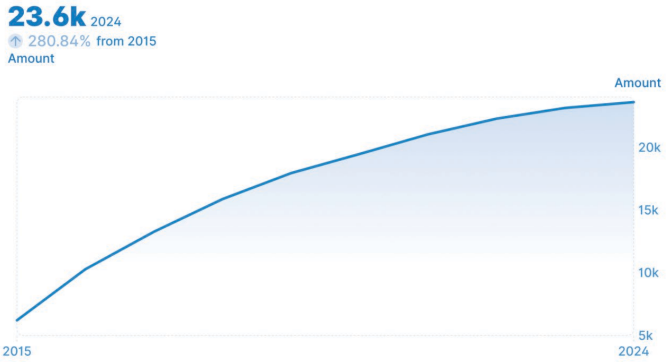
Industry Demand

The demand-side analysis is based on AI-related vacancies collected from the Hong Kong job market in November 2025. Rather than measuring long-term hiring trends, these postings provide a snapshot of current employer demand. The postings are analyzed to identify required skills, experience levels, job types, and employer characteristics.

ASSESSMENT

Hong Kong Has Built a Large and Growing AI Workforce

Figure 1. Growth of Hong Kong's AI Talent Pool (Past 10 Years)



The number of AI professionals associated with Hong Kong increased by more than 280 percent between 2015 and 2024. The city continues to attract AI talent from around the world, particularly from Mainland China, the United States, and the United Kingdom. Employment outcomes remain strong, with AI employment rates remaining close to 90 percent in recent years.

These indicators suggest that Hong Kong has successfully expanded its AI talent base and remains an attractive destination for AI professionals. However, aggregate talent growth masks several important structural challenges.

Mismatch 1: Experience

Figure 2. Seniority Structure of AI Talent in Hong Kong (2015-2025)

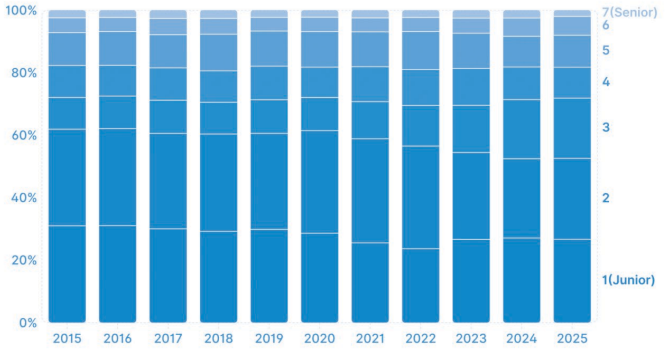
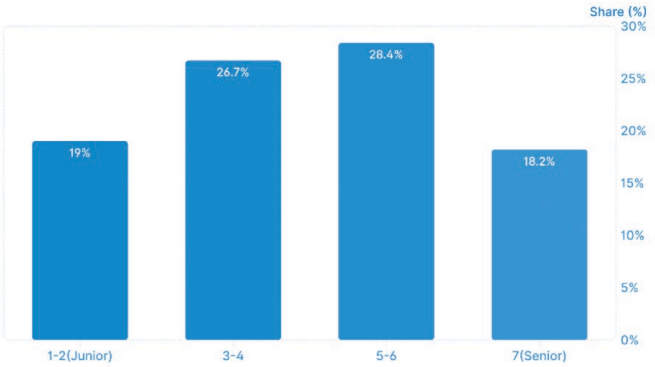


Figure 3. Seniority Requirements in AI Job Postings



The first challenge is an experience mismatch.

Recent AI talent inflows are heavily concentrated among junior and early-career professionals. In contrast, most employers demand focus on mid-level and senior practitioners capable of leading AI implementation projects.

Many organizations are no longer experimenting with AI. They are seeking professionals who can manage deployment, integrate AI into business processes, and oversee organizational transformation. As a result, firms often struggle to recruit experienced AI practitioners despite an expanding talent pool.

The challenge is therefore not the quantity of talent entering the market, but the limited availability of experienced professionals who can translate AI technologies into operational outcomes.

Mismatch 2: Skills

The second challenge is a skills mismatch.

Hong Kong's AI workforce demonstrates strong technical capability, particularly in machine learning, deep learning, algorithms, and data science.

However, hiring demand increasingly emphasizes applied capabilities rather than purely technical expertise. Most organizations do not build foundational AI models or conduct frontier AI research. Instead, they are looking for professionals who can solve business problems, redesign workflows, integrate AI systems, and work effectively across technical and non-technical teams. As AI adoption moves from experimentation toward implementation, business understanding and deployment experience become increasingly important.

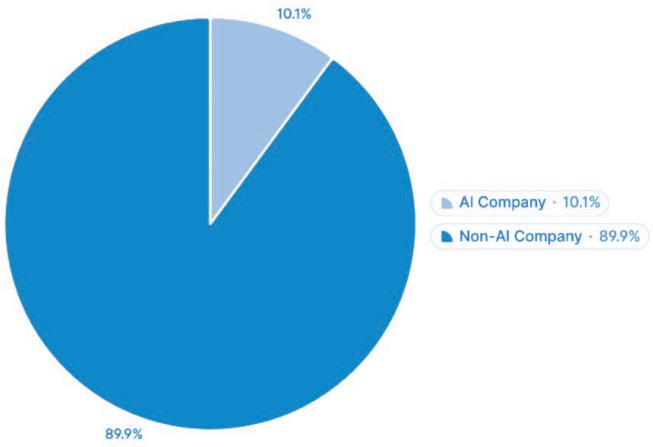
Mismatch 3: Ecosystem

The third challenge is an ecosystem mismatch.

AI development and AI adoption often occur in different parts of Hong Kong's innovation ecosystem.

Many AI startups and technology firms focus on technical innovation and product development. Meanwhile, most hiring demand originates from traditional industries such as finance, logistics, and professional services.

Figure 4. Job Postings by Firm Type



However, nearly 90 percent of AI-related job postings come from non-AI firms. This suggests that the future of AI in Hong Kong will depend less on the growth of AI companies alone and more on the ability of traditional industries to absorb and deploy AI technologies. Without stronger connections between technology developers and industry users, AI innovation may struggle to scale into broader economic impact.

RECOMMENDATIONS

Shift From Talent Quantity to Talent Quality

Future AI talent strategies should place greater emphasis on alignment rather than volume. While attracting talent remains important, policymakers should also focus on increasing the proportion of experienced professionals with demonstrated implementation capabilities. Developing pathways for junior professionals to accumulate practical experience and transition into leadership roles will be equally important.

Strengthen Applied AI Capability

Universities, training providers, and professional development programs should place greater emphasis on applied AI skills. This includes deployment experience, workflow redesign, system integration, industry knowledge, governance, and responsible AI practices. The most valuable AI professionals of the future may not be those with the strongest technical backgrounds, but those who can successfully bridge technology and business.

Build Stronger Industry-AI Partnerships

The next stage of AI development in Hong Kong requires closer collaboration between AI developers and industry users. Pilot projects, industry partnerships, corporate innovation programs, and public-private collaborations can help connect technical expertise with real-world business challenges. Such initiatives can accelerate AI adoption while simultaneously creating valuable learning opportunities for AI professionals.

CONCLUSION

Hong Kong has made substantial progress in building its AI talent base. The city has attracted talent, expanded its workforce, and strengthened its position as a regional AI hub. However, the next phase of AI development will depend less on the number of AI professionals and more on how effectively talent aligns with industry needs.

The central challenge is therefore not an AI talent shortage, but an AI talent mismatch. Addressing mismatches in experience, skills, and ecosystem connections will be essential if Hong Kong is to convert its growing AI capabilities into sustained economic and social impact.



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