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Hong Kong Institute of Human Resource Management

Operated by Hong Kong Institute of Human Resource Management Limited

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Mr Chris Sun, JP
Secretary for Labour and Welfare
Labour and Welfare Bureau
10/F, West Wing, Central Government Offices
2 Tim Mei Avenue
Tamar, Hong Kong

Dear Mr Sun,

Re: Review of Talent List 2024

The Hong Kong Institute of Human Resource Management is delighted to offer our insights on the Talent List. Our focus remains on addressing the ongoing talent shortages in diverse sectors and closing the gaps in professional and technical expertise crucial for Hong Kong's sustainable development.

Enclosed are the recommendations from our members and stakeholders regarding professions or occupations that should be considered for inclusion in the Talent List. We have also proposed updates to enhance the effectiveness of the Talent List. We hope you will find our suggestions useful.

Yours sincerely,

Lawrence Hung
President
Hong Kong Institute of Human Resource Management

Encl.

Review of the Talent List 2024

We propose to **add** the below new professions/occupations in the Talent List -

	Proposed Profession/occupation	**Proposed Description of Tasks and Qualification Requirements**	**Reasons** (with reference to the latest and projected manpower requirements)
Development and Construction			
1.	Building Information Modelling (BIM) Engineer	Plan, design, and supervise Building Information Modelling (BIM), identify and resolve BIM technology implementation issues and problems, and assure quality deliverables of the related construction projects. *BIM qualification*	Insufficient talent from local market due to high demand from government/developers/consultants/contractors in construction industry, and loss of talent due to emigration wave and increase demand from local infrastructure projects.
Experienced Financial Professionals in ESG			
2.	Carbon Practice Specialist	Integrating carbon management practices with green finance initiatives to drive sustainability and environmental impact. Analyse carbon emissions data, develop carbon reduction strategies, and advise on sustainable finance solutions to support environmental goals. Driving sustainable financial practices. *Degree-holder in Environmental Science, Sustainability, Finance, or related field. Demonstrated experience in carbon management, carbon accounting, and green finance.*	Growing awareness of ESG practices in Hong Kong leads to a high demand of financial specialists in ESG. Carbon Practice Specialist is an emerging role and the initiatives are evolving. Anticipate that more demand for this role will be upcoming for the future development.
E-commerce Specialists			
3.	E-commerce Marketing Specialist - Short-Video Integration	Integrates short-video content creation and marketing strategies into e-commerce platforms to engage customers and drive sales through visual storytelling. *Degree-holder in Marketing, Communications, Digital Media, or a related field. Proven experience in creating and*	The scarcity of local talent in Hong Kong's e-commerce sector stems from the rapid evolution of the industry in the region. As technology continues to be integrated into e-commerce practices, the demand for experts proficient in applying these technologies exceeds the current availability in the local market.

		integrating short-video content in e-commerce or digital marketing campaigns. Proficiency in video editing software and knowledge of short-video platforms. Strong understanding of content marketing strategies and social media trends.	The intricacies of adapting technology to e-commerce platforms specific to the local market necessitate experts who can tailor solutions to meet the unique needs of Hong Kong consumers. This underscores the critical need for specialised talents within local offices to drive business development and innovation in the dynamic e-commerce landscape.
4.	E-commerce Application Technology Specialists	Drive innovation in applying cutting-edge technologies such as Artificial Intelligence (AI), Gamification, and Virtual Reality (VR) to enhance e-commerce platforms. Integrating solutions and technologies to enhance and personalise user experiences, implementing gamification strategies to boost engagement and loyalty, and leveraging VR technology to create immersive shopping environments. *Degree-holder in Computer Science, Information Technology, or a related field. Track record of successfully implementing various technologies and innovation in an e-commerce or digital marketing setting. Knowledge of e-commerce platforms, user experience design, and technological trends.*	
5.	E-commerce UI/UX Specialist	Design and optimise user interfaces and experiences within our e-commerce platform. Creating visually appealing and user-friendly interfaces, enhancing the overall shopping experience, and driving customer engagement and conversions. *Degree-holder in Graphic Design, Interaction Design, Human-Computer Interaction, or a related field. Proven*	

		experience in UI/UX design, with a focus on e-commerce or digital product design. Proficiency in design tools such as Adobe XD, Sketch, Figma, or similar software. Strong portfolio showcasing a range of UI/UX projects and design solutions.	
Experienced Professionals in Fintech			
6.	Crypto Technology Specialist	Developing blockchain solutions, implementing smart contracts, conducting cryptocurrency security assessments, and optimising crypto-related technologies. Collaborating with blockchain developers, security experts, and IT professionals, contribute to the design and implementation of advanced crypto technologies. *Degree-holder in Computer Science, Information Technology, or related field, with a focus on blockchain technology, cryptography, and decentralised systems. Proficiency in programming languages such as Solidity, C++, or Python, as well as experience with blockchain frameworks like Ethereum or Hyperledger.*	Insufficient talent from local market due to rapid evolution and complexity of cryptocurrency technologies, which require specialised skills and knowledge that may not be widely available in the local talent pool.
7.	Cryptocurrency Analyst	Analysing market trends, performing technical analysis, and providing insights on cryptocurrency investments. *Degree-holder in Finance, Economics, Mathematics, or a related field with a focus on financial analysis and data analytics. Knowledge of blockchain technology, market analysis, and financial modelling. Certifications in blockchain or*	Rapidly evolving nature of the cryptocurrency market, which requires specialised knowledge and skills that may not be widely available in the local talent pool.

		cryptocurrency-related areas, such as Certified Cryptocurrency Investigator (CCI) or Certified Bitcoin Professional (CBP).	
Innovation and Technology – Web3 related			
8.	Blockchain Developer	Building decentralised applications (dApps) and smart contracts using blockchain platforms like Ethereum, Solana, or Polkadot. *Degree-holder in Computer Science, Software Engineering, or a related field with a focus on blockchain technology. Proficiency in programming languages such as Solidity, C++, or Java, as well as experience with blockchain frameworks like Ethereum, Hyperledger, or Corda.*	The Government has established of the Task Force on Promoting Web3 Development. As the adoption of blockchain and decentralised finance (DeFi) grows, the need for roles related to Web3 technologies becomes increasingly important.
9.	Smart Contract Auditor	Reviewing and analysing smart contract code to ensure security, identify vulnerabilities, and suggest improvements. *Degree-holder in Computer Science, Information Security, or a related field with a focus on blockchain technology and smart contract development. Proficiency in programming languages commonly used in smart contract development, such as Solidity for Ethereum. Certifications in blockchain security, such as Certified Smart Contract Developer or Certified Blockchain Security Professional.*	
10.	Decentralised Finance (DeFi) Developer	Design and develop innovative financial products and services on blockchain platforms, such as lending platforms, decentralised exchanges, and yield farming tools. Leverage blockchain technology, smart contracts, and decentralised	

		protocols to create secure, efficient, and transparent DeFi solutions that offer users decentralised access to traditional financial services. *Degree-holder in Computer Science, Software Engineering, or a related field, with a strong foundation in blockchain technology and decentralized finance (DeFi) concepts. Proficiency in programming languages such as Solidity, familiarity with Ethereum and other blockchain platforms, and experience in developing smart contracts and decentralized applications (dApps).*	
11.	NFT (Non-Fungible Token) Developer	Developing and managing NFT projects, which encompass creating digital art, collectibles, virtual real estate, and other unique digital assets that are tokenized on blockchain platforms. *Degree-holder in Computer Science, Digital Arts, or a related field, with a focus on blockchain technology and NFT standards. Proficiency in programming languages like Solidity for smart contract development, familiarity with blockchain platforms such as Ethereum.*	
12.	Blockchain UX/UI Designer	Designing user interfaces and user experiences for blockchain applications and platforms. *UX/UI design skills, understanding of blockchain technology, and user-centred design principles.*	

13.	Blockchain Security Specialist	Ensuring the security of blockchain networks and applications, conducting security audits, and implementing security measures. *Knowledge of blockchain security practices, penetration testing, and cybersecurity.*	
Innovation and Technology			
14.	Hardware System Engineer or Electronic System Engineer	Designing, developing, and testing hardware systems to ensure functionality and efficiency. Tasks include troubleshooting and resolving hardware-related issues, collaborating with software engineers for system integration, and conducting upgrades and maintenance to keep systems operational and up-to-date. This role plays a key part in enhancing hardware system performance and seamless integration with software components. *Degree-holders in Electrical Engineering or related field from a well-recognised university, with proven experience in hardware system design.*	High demand for professionals with specialised, rapid advancement of technology and increasing complexity of hardware systems require specific expertise that local market is not readily available.
15.	MEMS (Integrated microelectromechanical systems) Engineer	Design and develop microelectromechanical systems (MEMS) for various applications. Tasks include conducting testing and validation of MEMS devices to ensure optimal functionality and performance. Collaborating with cross-functional teams, they integrate MEMS technology into products seamlessly. Additionally, the Engineer troubleshoots and resolves any issues related to MEMS	High demand across industries such as electronics, telecommunications, and medical devices, leading to an insufficient supply of qualified professionals. Moreover, the rapid advancement of MEMS technology necessitate specific skills and knowledge, not enough talent in the local labour pool.

		devices and systems to maintain operational efficiency and reliability. *Degree-holder in related field with experience in designing and developing MEMS devices.* *Proficiency in MEMS fabrication techniques and simulation tools.*	
16.	Biomedical Engineering Specialist	Applying engineering principles and techniques to the field of medicine and biology. Design and develop medical devices, equipment, and systems to improve healthcare delivery and patient outcomes. Collaboration with healthcare professionals, researchers, and manufacturers to innovate technology solutions for diagnosing, treating, and monitoring medical conditions. *Degree-holder or above in biomedical engineering, bioengineering or related field.*	Insufficient talent from local market due to high demand from Hospital Authority. Keen competition in the market. Hong Kong is in need of integrating innovation and technology into healthcare. Specialists are required to develop advanced medical devices and technologies, driving advancement in the medical field. Insufficient talent from local market to meet the increasing demand.
17.	Sustainability Engineer	Incorporating sustainable practices and principles into engineering projects to minimise environmental impact and promote resource efficiency. Responsibilities include developing and implementing strategies to reduce energy consumption, waste generation, and carbon emissions in various engineering processes and systems. *Degree-holder in related field, relevant certifications in sustainability practices.*	Increasing demand for the role as more companies focus on ESG initiatives, companies need professionals to design and implement sustainable solutions.

18.	Telecommunications and Radio Engineering Specialist	Designing and developing telecommunications systems and radio frequency equipment. Conduct testing and optimisation of communication networks and radio technologies to ensure optimal performance. Collaborating with cross-functional teams to integrate new technologies and solutions in communication networks. *Degree-holder or above in Telecommunications Engineering, Electrical Engineering, or related field. Experience in radio frequency technology and telecommunications systems.*	Growing need for telecommunications infrastructure and the expansion of 5G networks amplify the demand for skilled specialists in this sector.
19.	Robots Software Engineering Specialists	Developing and programming software for robotic systems to enable autonomous operation and intelligent decision-making. Design algorithms, implement control systems, and optimise software to enhance robot performance in various applications. Collaboration with robotics engineers and researchers to integrate software with hardware components. *Degree-holder in Computer Science, Robotics, Electrical Engineering, or a related field. Proficiency in programming languages such as C++, Python, or ROS (Robot Operating System). Experience with robotics software development, control systems, and algorithms.*	Increasing demand due to the increasing use of robotics and AI in various industries such as manufacturing, healthcare, and logistics. Companies are seeking professionals with expertise in robotics software development to drive innovation and automation in their operations.
20.	VR/AR Engineering Specialists	Designing, developing, and implementing virtual reality (VR) and augmented reality (AR) technologies and applications. Create immersive experiences, interactive	Talents are required in various industries, companies are seeking professionals with expertise in VR/AR

		simulations, and innovative solutions that merge digital content with the physical world. Collaborating with cross-functional teams to integrate VR/AR technology into various industries such as gaming, education, healthcare, and training. *Degree-holder in Computer Science, Software Engineering, or a related field with a focus on VR, AR or computer graphics. Proficiency in programming languages such as C++, Unity, or Unreal Engine. Experience with 3D modelling, animation, and user interface design.*	development to create engaging and immersive experiences for users.
21.	Experienced Big Data Engineer and Machine Learning Specialist	Gathering data from databases, APIs, and third-party services. Ensuring data quality by removing inaccuracies, filling missing values, and transforming data. Combining data from various sources for consistency. Creating meaningful features to enhance model performance. Developing and training machine learning models. Testing models for accuracy and reliability. Implementing models in production and integrating with applications. Monitoring and updating model performance regularly. *Expertise in programming languages such as Python, SQL, and tools like Apache Spark or Hadoop. Data Management: Strong skills in ETL (Extract, Transform, Load) processes and database management. Machine Learning: Solid understanding of algorithms, model training, and evaluation techniques.*	Hong Kong is in need of professionals who specialise in big data roles related to AI to optimise AI performance. While big data scientists excel in handling and analysing large datasets, they may not necessarily possess deep expertise in AI technologies and algorithms. The current talent pool in Hong Kong may lack individuals who can effectively bridge the gap between big data and AI, leveraging data insights to enhance AI performance and drive more impactful applications.

Innovation and Technology – AI Specialists			
22.	Experienced AI Research Specialist	Conducting advanced research in AI algorithms and techniques. Publishing papers and presenting findings at conferences. Collaborating with academic institutions and other researchers. Developing new models and enhancing existing ones. Experimenting with cutting-edge AI technologies and methodologies. *Deep understanding of machine learning, deep learning, and neural networks. Proficiency in programming languages like Python, R, and C++. Strong analytical and problem-solving skills. Excellent written and verbal communication for presenting research. Advanced degrees (PhD preferred) in computer science, AI, or related fields.*	Insufficient talent specialising in AI in the local market. Highly competitive global market for AI talent.
23.	Experienced AI Application Specialist	Implementing AI solutions in business processes and products. Customising AI models to suit specific business needs. Working closely with cross-functional teams to deploy AI technologies. Training and supporting end-users on AI applications. Monitoring and maintaining AI systems for performance and improvement. *Practical knowledge of deploying AI solutions in real-world scenarios. Familiarity with AI tools and platforms (e.g., TensorFlow, PyTorch). Strong project management and stakeholder engagement skills. Experience in data analysis and interpretation. Background in computer science, data science, or related disciplines.*	Hong Kong has a high demand for application roles than pure research and development (R&D) positions attributed to the city's business-oriented nature, which places a greater emphasis on practical application roles. Companies often prioritise the implementation and deployment of AI technologies to drive operational efficiency, enhance customer experiences, and gain a competitive edge in the market. This led to a higher demand for professionals with hands-on experience in implementing AI solutions rather than those specialising in R&D.

| 24. | Natural Language Processing Specialists (a subset of AI) | Developing algorithms and models that enable computers to understand, interpret, and generate human language. Speech recognition, language translation, sentiment analysis, and text generation using artificial intelligence techniques. Collaborating with data scientists, linguists, and software engineers and apply NLP technologies to various applications, including chatbots, virtual assistants, and text analytics tools.

Degree-holder in Computer Science, Computational Linguistics, Artificial Intelligence, or a related field. Proficiency in programming languages such as Python, knowledge of machine learning algorithms, and experience with NLP tools and libraries like NLTK and spaCy. | Insufficient talent specialising in AI in the local market. Demand for NLP Specialists is increasing rapidly as organisations seek to leverage the power of AI in processing and analysing vast amounts of textual data. Companies across industries such as healthcare, finance, and customer service are looking for professionals with expertise in NLP to extract valuable insights from unstructured text data. |

We propose the following **amendments** in relation to the below professions/occupations in the existing Talent List -

	Profession/occupation		Description of Tasks and Qualification Requirements		Reasons (with reference to the latest and projected manpower requirements)
	From	To	From	To	
1.	Experienced Cloud Infrastructure Specialists		Planning, designing, maintaining, and optimising cloud infrastructure in data centres	Also encompass external cloud services using modern cloud technologies, ensuring external cloud services meet the necessary standards for data protection and compliance.	
2.	Experienced Artificial Intelligence (AI) Specialists		At least 4 years of relevant experience in building AI or big data analytics solution in industry sectors…	Successfully implemented projects in building AI or big data analytics solution in industry sectors…	In the ever-evolving landscape of AI / Innovation & Technology, the rapid advancements in technology, especially with emerging technologies, present a challenge for traditional experience requirements. The need for professionals with extensive experience may not always align with the rapidly changing demands of the dynamic market.

Submitted by: Hong Kong Institute of Human Resource Management

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