LOKE FU (He/Him/His)

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SUMMARY

Innovative Data Scientist with a proven track record of developing advanced AI models and creating intelligent solutions for diverse client projects. Specialized in Machine Learning, Generative AI, and Large Language Models.

EDUCATION

The University of Hong Kong (HKU), Hong Kong 2022 - 2024
Master of Science in Artificial Intelligence

The University of Hong Kong (HKU), Hong Kong 2018 - 2022
Bachelor of Science in Statistical Decision Sciences (Decision Analytics)
Academic Award: HKU Foundation Entrance Scholarships (2018 - 2022)
Exchange: **Harvard University,** Massachusetts, U.S. 2019

SELECTED WORKING EXPERIENCE

Tictag Singapore, Hong Kong Office, Hong Kong
Data Scientist Nov 2024 - Present

- Implemented state-of-the-art AI models and applications tailored for esteemed organizations and industry leaders.
- Pioneered the development of an Intelligence Search Chatbot for National Park Singapore, integrating RAG and LLMs within the LangChain framework alongside OCR capabilities on PDF documents.
- Engineered a sophisticated Multi-Camera Multi-Object Tracking system featuring cutting-edge Object detection techniques, seamlessly translating video content into a 2D-plane visualization.
- Applied Multimodal LLM to enhance long-video comprehension, leveraging a Chain-of-Thoughts approach to enable downstream applications like event detection, video Question & Answering, and video captioning.

Hong Kong PolyU & University of Maryland, Centre for Advances in Reliability & Safety Limited, Hong Kong
Data Scientist Feb 2024 – Nov 2024

- Developed and implemented AI and machine learning algorithms focused on enhancing reliability and safety, employing predictive modeling, classification techniques, and deep learning networks.
- Collaborated with senior engineers on software development initiatives for commercial-grade applications.
- Recognized with a Gold Medal at the 49th International Exhibition of Inventions Geneva for the innovative Cable Prognosis project, showcasing excellence in predictive modeling and reliability analysis.

The University of Hong Kong (HKU), School of Computing & Data Science, Hong Kong
Research Assistant, Master's Researcher Sep 2022 - Jan 2024

- Designed and developed *DreamMoRe*, a subject-driven Text-to-Image generation framework. Integrated Text Rewriting, Image Augmentation, and Multi-Modal Loss in DreamBooth to enhance image generation capabilities.
- Implemented Prompt-tuning and Instruction-tuning techniques on Large Language Models to improve image caption quality and enhance the model's comprehension of intricate text prompts.
- Developed novel image augmentation methodologies using segmentation models and Image-to-Image diffusion models to bolster the training of text-image pairs, thereby enhancing model generalization and robustness.
- Introduced semantic control through CLIP to reinforce prompt fidelity and subject fidelity.
- Surpassed DreamBooth in both quantitative CLIP-based metrics and qualitative human assessments.

Johnson Controls, YORK (CHINA), China
Business Analyst, Intern Jun 2022 - Aug 2022

- Conducted comprehensive market research and data analysis to uncover key trends and opportunities within the air conditioner market, providing valuable insights for strategic decision-making.
- Contributed to the development of marketing strategies and business plans for the successful launch of new products, actively participating in the planning and execution processes.

SKILLS & LANGUAGES

- Data: Database (SQL), Processing (Spark, Hadoop), Visualization (Power BI).
- Development: Programming Languages (Python, R); Machine Learning (Pytorch, Hugging Face, TensorFlow, Scikit-learn, NumPy, Pandas, Matplotlib); Web (HTML, CSS, JavaScript, Bootstrap, Gradio, FastAPI).
- Deployment: MLOps, Cloud Platforms (AWS, GCP), Containerization (Docker), Version Control (Git).
- Languages: English (Proficient), Mandarin (Native), Cantonese (Conversational).