PENG MINQI

THE CHINESE UNIVERSITY OF HONG KONG

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SUMMARY

Hardworking student offering internship work experience and extensive knowledge of computer science. Skilled at project support with proven history of solutions-oriented problem-solving. Meticulous and detail-oriented with excellent teamwork as well as organizational and communication skills.

EDUCATION

Bachelor of Science in Computer Science, 08/2022 - 07/2026 (Expected Graduation Date: July 2026)
The Chinese University of Hong Kong - HONG KONG, CHINA

- CGPA: 3.241
- Stream: Intelligence Science
- Core Coursework: Numerical Optimizations, AI and Machine Learning, Human-computer Interaction
- Major Electives: Cloud Computing and Storage, Blockchain, Computer Networks, Computational Finance

WORK HISTORY

Intern, Computer Vision, AI Algorithm, 07/2025-08/2025
Midea AI Research Center – FOSHAN, GUANGDONG, CHINA

- Implemented multimodal data annotation to the company's internal algorithm management platform using Label Studio and mastering cloud-based data flow methods.
- Utilized Vision-Language models to achieve AI pre-annotations in object detection tasks and then prepare datasets to fine-tune models for tasks in the field of home appliance.
- Conducted feasibility studies and experiments on CLIP and Chinese-CLIP for task scenarios in home appliance, ranging from image-text retrieval to zero-shot classification tasks. Mean recalls of cross-modal retrieval increase by 6% after model fine-tuning.

Intern, Intelligent Positioning and Navigation Department, Research Institute, 08/2024 - 09/2024
UBTECH ROBOTICS CORP LTD – SHENZHEN, GUANGDONG, CHINA

- Gained valuable experience working within the field of Embodied Agent's Location and Navigation, applying learned concepts directly into relevant work situations.
- Developed and implemented five related Vision-and-Language Navigation models (especially L3VMN) from the latest papers on company simulation platform, then submitting reports to prepare for the future products that robots can do tricky tasks, particularly visual target navigation in unknown environments.

TRAINING PROGRAMS

Courses in Large Language Models, 07/2024
Peking University Summer School – BEIJING, CHINA

- Learn basic knowledge in LLMs, including attention mechanism and transformers, pretrained models (especially CLIP), and some parameter-efficient fine-tuning methods.
- Read several papers provided by the professor and write reading reviews on *Large Language Model as Attributed Training Data Generator*.
- Conduct experiments that compare Jaccard Similarities and other performance metrics by adding different identity prefixes (such as teacher, student, adult, etc.) to prompts for some common questions (e.g., what is the best dish in New York).

Researcher in Computer Vision, 07/2023 - 08/2023
IEMP Research Program – SHANGHAI, CHINA

- Accomplished a group-based program with coding and delivered a project report.

- Got touched with some related concepts (like image segmentations and machine learning methods) in computer vision and completed an academic project on Facial Detection based on the architecture of ResNet. The accuracy of our model reaches 84.56%.
- Gained some experience in conducting experiments and academic writing, and thus get a solid foundation in computer vision

PROJECT (ON GITHUB) EXPERIENCE

Final Year Project (Ongoing) – Vision-Language Models (Python), Group Project
Knowledge Distillation for Efficient Open-Vocabulary Vision (KDEOV): Transferring CLIP's Semantic Alignment to Lightweight Models

- Designed a dual-stream model that marries a frozen CLIP text encoder with a YOLO-based visual backbone augmented by a learnable projection head and Feature-wise Linear Modulation (FiLM), enabling text-conditioned feature extraction without invoking the heavy CLIP image tower at inference time.
- Evaluated retrieval and zero-shot classification performance across multiple datasets and introduced a feature alignment pre-training regime that enables the model to perform Open-Vocabulary Object Detection tasks.

Blockchains – Decentralized Voting Systems (Java, Solidity), Individual Project
Sybil-Resistant Decentralized Voting System

- A blockchain-based voting system that uses Non-Fungible Tokens (NFTs) to prevent Sybil attacks, ensuring that each voter can only cast one vote per proposal.

Software Engineering – Full-Stack Social Media Web Application (JavaScript, CSS, and HTML), Group Project
BuzzNet

- Contributed to full-stack team-based implementations and engineered the core user interface and interactive features using JavaScript, CSS, and HTML, implementing a responsive design that supports user authentication, post creation/deletion, liking, and commenting functionalities.
- Developed and integrated RESTful API endpoints using MongoDB to enable real-time data synchronization for user activities, ensuring seamless user experience across client-side interactions.

Database Management Systems – Sales Systems (Java, JDBC, Oracle SQL), Group Project
Sales Systems for A Computer Part Store

- Engineered the administrator module to manage database lifecycle operations, utilizing Java and JDBC to implement functionalities for creating/deleting table schemas and batch loading data from formatted text files into the Oracle database.
- Developed robust data initialization and management features, including dynamic table content display, ensuring data integrity and providing a reliable foundation for subsequent sales and reporting transactions within the system.

PUBLICATIONS

Neuromorphic Computing and Spiking Neural Network Hardware Design for Autonomous Control Systems, Minqi Peng. *DYNA* 2025

Modeling and Application of Deep Multimodal Integration in Intelligent Perception Systems, Minqi Peng. *AIMMEE* 2025

Quantum-Safe Cryptography and Hardware Co-verification Technology for Trusted Computing Environments, Minqi Peng. *ICOMIC* 2025

SKILLS

Programming & Software: C/C++, Java, Python, JavaScript, SQL, and other basic computer skills including HTML, Git, Linux, and command lines

Machine Learning & Deep Learning: PyTorch, TensorFlow, NumPy, Scikit-learn

Computer Vision & Multimodal Models: CLIP, Transformers, Object Detection Pipelines

Language: Chinese Mandarin, English **(IELTS: 7.5, GRE: 326)**

Others: Technical Writing, Research Review, Team Collaboration, Presentation & Reporting