

Yuanzhong Chen

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EDUCATION

The Hong Kong University of Science and Technology (HKUST) Hong Kong, China
B.Sc. in Computer Science and Mathematics (Double Major) Sep. 2023 – June 2027 (Expected)

- Cumulative GPA: 3.923 / 4.3
- Selected Coursework: Advanced Deep Learning Architecture (Postgrad level), Graph Neural Networks, Large Language Models Honors Probability.

École Polytechnique Fédérale de Lausanne (EPFL) Lausanne, Switzerland
Exchange Student Spring 2026 (Nominated)

Stanford University California, USA
International Honors Program (Summer Session) June 2025 – Aug. 2025

- Coursework: Machine Learning (CS229), Design and Analysis of Algorithms (CS161)

Note: All courses listed in this CV with available grades are in the A range (A- or above).

RESEARCH EXPERIENCE

Pathology Report Generation via Multi-modal Learning Sep. 2025 – Present
Research Assistant, Supervised by Prof. Hao Chen HKUST Smart Lab

- Proposed a novel multi-modal framework to automatically generate pathology reports from Whole Slide Images (WSI).
- Developing a two-stage training pipeline** for pathology report generation, leveraging a highly structured, high-quality dataset to enhance generation accuracy.
- Addressed the scarcity** of high-quality paired WSI-report datasets by constructing a large-scale instruction-tuning dataset.
- Designed a modality-alignment algorithm to enhance consistency between visual features and text descriptions, and proposed a disentanglement method to **decouple template artifacts from diagnostic information**.
- Leveraged State-of-the-Art Vision-Language Models (VLMs) to assist pathologists, targeting measurable improvements in clinical workflow efficiency.

Cancer Diagnosis and Prognosis with Whole Slide Images Sep. 2024 – Sep. 2025
Undergraduate Researcher, Supervised by Prof. Hao Chen (UROP) HKUST Smart Lab

- Conducted a comprehensive survey on deep learning methods for cancer diagnosis, synthesizing insights from over 10 seminal papers and recent benchmarks.
- Implemented and evaluated deep learning baselines, including **MotCAT and MACT**, to analyze performance gaps in cancer subtype classification.
- Identified key computational bottlenecks inherent in **gigapixel resolution** and **high-dimensional feature spaces** that limit traditional ML models.

iFLYTEK Co., Ltd. June 2024 – Aug. 2024
AI Data Processing Intern Hefei, China

- Developed automated Python scripts for large-scale web data collection, improving data acquisition efficiency.
- Preprocessed unstructured data to support the unsupervised training of Large Language Models (LLMs).
- Analyzed data quality and summarized findings in technical reports presented to the senior research team.

PROJECTS

Zero-Shot Spatial Reasoning with Large Language Models | Course Project Mar. 2025 – May 2025

- Investigated the spatial reasoning capabilities of LLMs in zero-shot settings using custom prompt engineering.
- Designed and executed experiments to evaluate model performance on complex geometric reasoning tasks.

AWARDS & HONORS

Dean's List, HKUST 2023 – 2025 (Awarded 4 times)
University Scholarship (Top 2% Students), HKUST 2023 – 2024

SKILLS

Languages: Mandarin (Native), English (Professional Proficiency, **TOEFL: 102**)
Programming: Python (PyTorch, TensorFlow), C++, MATLAB, R, HTML/CSS
Tools: Linux, Git, Docker, LaTeX, Vim