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EDUCATION

The Hong Kong Polytechnic University (PolyU)

B.Eng. (Hons) in Product Engineering with a Second Major IE

B.Eng. (Hons) Scheme in Product and Industrial Engineering

Hong Hum, Kowloon, Hong Kong SAR

September 2025 - May 2028 (Expected)

September 2024 - August 2025

Tsinghua University (Exchange)

B.Eng. in Creative Design and Intelligent Engineering

Beijing, China

September 2025 - January 2026 (Scheduled)

College of Professional and Continuing Education (CPCE), PolyU

Associate in Statistics and Data Science

Yau Ma Tei, Kowloon, Hong Kong SAR

September 2023 - August 2024

RESEARCH STUDY

Tsinghua University Tsien Excellent in Engineering Programme (TEEP) & X-Institute

Jointed Training Research Scholar (Socioal and Intelligent Innovation)

Supervisor: Prof. Ming TANG

Beijing, China

September 2024 - May 2028 (Expected)

Shenzhen Medical Academy of Research and Translation (SMART)

Visiting Research Student - Institute of Biomolecular Architecture and Biological Interactions (IBABI)

Supervisor: Dr. Mingxu HU (PI), Dr. Qi ZHANG

Shenzhen, Guangdong, China

June 2025 - July 2025

EXCHANGE

1) Summer School on Mathematical Biology, Institute of Natural Sciences and School of Mathematics, Shanghai Jiao Tong University *August 2025*

2) Semester Exchange (2025/2026 Semester 1), Tsinghua University *September 2025 - January 2026*

3) Social Innovation Training, Tsinghua University & X-Institute & ByteDance Ltd. & Accenture Co. Ltd. *January 2025*

4) AI Winter School 2025, Center for the Fundamental Physics of the Universe & Brown University *January 2025*

5) 2024 Ministry of Education of PPC Teacher and Student Exchange Plan - Human-machine *December 2024*

Shared Control Intelligent Car Project, Northeastern University & The Hong Kong Polytechnic University

6) X-Challenge 2024: Interdisciplinary Cutting-edge Disruptive Innovation, Tsinghua University & X-Institute *June 2024 - July 2024*

7) X-Idea 2023: X-Institute International Summer School, Tsinghua University & X-Institute *June 2023 - July 2023*

PUBLICATIONS

1. Wang, X.^{*}, **Huang, T. Y.**, Jiang, Z., & Wang, Y. (2025). Bio-Cryptography: Dual deep learning framework for protein watermarking via geometric-chemical fingerprinting [**Poster**]. International Conference on Machine Learning (ICML) 2025 Workshop on NewInML. <https://icml.cc/virtual/2025/50442>

2. Wang, Y.^{*}, Wang, J., **Huang, T. Y.**, Yang, J., Yang, G., & Xu, Z. (2025). STGCN-LSTM for olympic medal prediction: Dynamic power modeling and causal policy optimization [**Paper**]. International Conference on Machine Learning (ICML) 2025 Workshop on NewInML. <https://doi.org/10.48550/arXiv.2501.17711>

3. Wang, Y.^{*}, Cai, M., & **Huang, T. Y.** (2025). AI for disease prediction: Performance insights and key limitations. *Journal of Clinical Neuroscience*, 138, 111360. <https://doi.org/10.1016/j.jocn.2025.111360>

4. Wang, X.^{*}, Wang, Y.⁺, & **Huang, T. Y.**⁺ (2025). Crypto-ncRNA: Encryption algorithm based on non-coding RNA (ncRNA) [**Poster**]. International Conference on Learning Representations (ICLR) 2025 Workshop on AI for Nucleic Acids (NA). <https://openreview.net/forum?id=j60DUDw4vN>

^{*} First Author ⁺ Co-First Author

ACADEMIC PARTICIPATION

Reviewer *ICML 2025 Workshop · 2nd AI for MATH* *2025*

Reviewer *F1000 Research* *2025*

WORK EXPERIENCE

AI Agent R&D Parttime *March 2025 - Present*
Apricot AI Ltd.

Assistant to the President (Management & Technical Director) *February 2025 - Present*
Hong Kong MBA Institute

AI Product & Algorithm R&D Intern *February 2025 - Present*
Qingbei Intelligent Technology Co., Ltd.

Student Intern *November 2024 - December 2024*
Research Centre - Data Science and Artificial Intelligence (RC-DSAI), PolyU

Student Assistant *October 2024 - October 2025 (Expected)*
Knowledge Transfer and Entrepreneurship Office, PolyU

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| Student Assistant Division of Science, Engineering & Health Studies, CPCE, PolyU | <i>March 2023 – May 2023</i> |
| AI & Data Trainee Royal Plaza Hotel (Accounting & IT Dept.) | <i>December 2023 – April 2024</i> |

VOLUNTEERING

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| Member, District Youth Development and Civic Education Committee Home Affairs Department (HAD), The Government of the Hong Kong Special Administrative Region (HKGOV) | <i>April 2025 – April 2027 (Expected)</i> |
| Master of Ceremonies – 75th PRC National Day Luncheon Hong Kong Federation of Trade Unions (HKFTU) | <i>October 2024</i> |
| Student Representative of B.Eng. (Hons) Product and Industrial Engineering (45498-PIE) Department of Industrial and Systems Engineering (ISE), PolyU | <i>September 2024 – Now</i> |
| Student Ambassador (Social Service Hours > 30 Hours) CPCE, PolyU | <i>October 2023 – October 2024</i> |
| Student Representative of Associate in Statistics and Data Science (8C112-SDS) Division of Science, Engineering, and Health Studies (SEHS), CPCE, PolyU | <i>September 2023 – August 2024</i> |

PROJECTS

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| Multimodal BERT Model Based Global Heatwave Disaster Adaptation Elements Extraction and Analysis <i>2024 Chinese Academy of Sciences (CAS) Undergraduate Innovation Practice Training Program</i> | November 2024 - September 2025 |
| <ul style="list-style-type: none"> · This research uses a multimodal BERT model to integrate text, images, and structured data to precisely identify key factors affecting heatwave adaptation. The research results will provide solid theoretical and data support for formulating scientific global heatwave response strategies and enhance society’s overall disaster adaptation capabilities. · Supervisor: Researcher Yong Ge (Institute of Geographic Sciences and Natural Resources Research, CAS, Distinguished Young Scholar) | |
| Research on Elderly Companionship Issues Based on AI Digital Twin Technology <i>Tsinghua University TEEP Enhanced Student Research Training (ESRT) Project</i> | <i>Dec 2024 - Dec 2025</i> |
| <ul style="list-style-type: none"> · This project centers on AI digital twin technology, aiming to alleviate the lack of emotional companionship for elderly people in the context of China’s aging population, while bridging the digital divide for seniors and enhancing AI practical capabilities for primary and secondary school students. The project is implemented jointly by Shenzhen X-Institute and ByteDance, among other institutions, divided into preparation, execution, and promotion phases. It plans to enhance intergenerational communication through students creating personalized digital twins for elderly people, exploring application scenarios of AI large models in social welfare fields. · Min Tang (Former Counselor of the State Council) | |

ACHIEVEMENTS

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| Scholarship - HKSAR Government Scholarship Fund – Reaching Out Award (ROA) | <i>2025</i> |
| Scholarship - PolyU ISE Sponsorship (International Conference) | <i>2025</i> |
| Scholarship - PolyU Undergraduate Entry Scholarship | <i>2024</i> |
| Scholarship - Overseas Exchange Scholarship (CPCE, PolyU) | <i>2024</i> |
| Awards - Most Academican Award (X-Institute) | <i>2023</i> |
| Certification - Microsoft Certified: Azure AI Fundamentals | <i>2021</i> |
| Certification - Advanced Level Certificate in Mathematics Enrichment Programme (PolyU) | <i>2021</i> |

SKILLS AND INTERESTS

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| Computer-based | Python (Pandas, PyTorch, TensorFlow, etc.), C++, SQL, SAS, R, CAD&CAE (SolidWorks), Adobe (Photoshop, Illustrator, InDesign), IMOD, PyMol, ChimeraX, LaTeX, MS Office |
| Manufacturing | Additive Manufacturing(FDM, SLA, SLS, etc.), Reverse Engineering, Quality Engineering, Robotics (Arduino/Raspberry Pi), Benchwork, Engineering Drawing |
| Business | Engineering Economics, Management and Organization, Marketing, Market Analysis, Engineering Law |
| Soft skills | Product & Industrial Design, Product Development, Project Management, Design Thinking, Design for Many(Optimizing, Manufacturing, Sustainability, etc.), Human-centered Design |
| Languages | Cantonese/Mandarin (Native), English (Fluent) |

DECLARATION

I hereby declare that all the details furnished above are true to the best of my knowledge and belief.