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EDUCATION

The Hong Kong Polytechnic University (PolyU) - Department of Industrial and Systems Engineering (ISE)	Hong Kong, China
BErg (Hons) in Product Engineering with a Second Major in Innovation and Entrepreneurship; Minor in Management	September 2024 - May 2028 (Expected)
Tsinghua University (Exchange) - Xinya College B.Eng. in Creative Design and Intelligent Engineering	Beijing, China September 2025 - January 2026
College of Professional and Continuing Education (CPCE), PolyU Associate in Statistics and Data Science	Hong Kong, China September 2023 - August 2024

PUBLICATIONS

- 1) Wang, X.*, Wang, Y.+, & **Huang, T. Y.** (2025). Crypto-ncRNA: Non-coding RNA (ncRNA) based encryption algorithm. *ICLR 2025 Workshop on AI for Nucleic Acid (AI4NA)*.
[Co-First Author. Top-tier AI Conference. Partnered with *Nature Methods*. Poster.] [Submitted to *Advanced Science*.] [\[Link\]](#)
- 2) Wang, Y.*, **Huang, T. Y.**+, Gao, Q., et al. (2025). HeDA: An Intelligent Agent System for Heatwave Risk Discovery through Automated Knowledge Graph Construction. *arXiv preprint arXiv:2509.25112*.
[Co-First Author. Preprint.] [Submitted to *NPJ Artificial Intelligence*.] [\[arXiv\]](#)
- 3) Wang, X.*, Wang, C., **Huang, T. Y.**, Wang, Y., & Yuan, Y. (2025). StrucTrace: Fourier watermarking for traceable biomolecular assets. *bioRxiv*.
[Preprint.] [Submitted to *Nature Structure and Molecular Biology*.] [\[bioRxiv\]](#)
- 4) Wang, X.*, Wang, Y., **Huang, T. Y.**, et al. (2025). Octopus Inspired Optimization (OIO): A hierarchical framework for navigating protein fitness landscapes. *Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2025)*.
[CCF-B Ranked Main Conference. Camera Ready.] [arXiv]
- 5) Wang, Y.*, Cai, M., & **Huang, T. Y.** (2025). AI for disease prediction: Performance insights and key limitations. *Journal of Clinical Neuroscience*, 138, 111360.
[SCI Indexed, JCR Q1, Impact Factor: 2.7] [DOI] [\[Link\]](#)
- 6) Wang, Y.*, Wang, J., **Huang, T. Y.**, et al. (2025). STGCN-LSTM for Olympic medal prediction: Dynamic power modeling and causal policy optimization. *ICML 2025 Workshop on NewInML*.
[CCF-A Ranked Conference Workshop. Poster.] [Link]
- 7) Wang, X.*, **Huang, T. Y.**, Jiang, Z., & Wang, Y. (2025). Bio-cryptography: Dual deep learning framework for protein watermarking via geometric-chemical fingerprinting. *ICML 2025 Workshop on NewInML*.
[CCF-A Ranked Conference Workshop. Poster.] [Link]

*First Author + Co-First Author

ACADEMIC SERVICE

Reviewer	ICML 2025 Workshop · 2nd AI for MATH	2025
Reviewer	F1000 Research	2025

RESEARCH EXPERIENCE

Tsinghua University - Tsien Excellent in Engineering Programme (TEEP) & X-Institute	Shenzhen, Guangdong, China
Jointed Training Scholar - Track of Social and Intelligent (Social Innovation)	September 2024 - May 2028 (Expected)
Supervisor: Prof. Min TANG (Former Counselor of the State Council), Dr. Xiaolei ZUO (Former Chief Economist & Chief Advisor to the CEO, China Galaxy Securities)	
Tsinghua University - Peking University Joint Center for Life Sciences, Tsinghua University	Beijing, China
Research Intern - Beijing Frontier Research Center for Biological Structure (FRCBS)	September 2025 - January 2026

(Expected)

Supervisor: Prof. Yigong SHI (President of Westlake University, Academician of the Chinese Academy of Sciences, Foreign Associate of the U.S. National Academy of Sciences), Dr. Yafei YUAN

The Future Laboratory, Tsinghua University

Beijing, China

Study Student - Human Factors Engineering and Intelligent Human Machine Interaction *September 2025 - December 2025*
Supervisor: Dr. Qianchen XIA (Assistant Researcher, The Future Laboratory, Tsinghua University)

Shenzhen Medical Academy of Research and Translation (SMART)

Shenzhen, Guangdong, China

Visiting Student (Research Intern) - Institute of Biomolecular Architecture and Biological Interactions (IBABI) *June 2025 - July 2025*
Supervisor: Dr. Minxu Huang

Chinese Academy of Sciences (CAS) - Institute of Geographic Sciences and Natural Resources Research Beijing, China

Research Student - State Key Laboratory of Resources and Environmental Information System *October 2024 - September 2025*
Supervisor: Prof. Yong GE (Distinguished Young Scholar, Institute of Geographic Sciences and Natural Resources Research, CAS)

The Hong Kong Polytechnic University

Hong Kong, China

Student Intern - Research Centre - Data Science and Artificial Intelligence (RC-DSAI) *November 2024 - December 2024*
Supervisor: Prof. Qing LI (Head of Dept. of Computing, PolyU), Prof. Xiaoyong WEI (Head of Dept. of Computer Science, Sichuan University)

HONORS & AWARDS

Scholarship - Ir. Dr. Wong Tit-shing Student Exchange Scholarship	2025
Scholarship - PolyU Global Engagement Office (GEO) Scholarship for Student Exchange	2025
Scholarship - HKSAR Government Scholarship Fund – Reaching Out Award (ROA)	2025
Scholarship - PolyU ISE Sponsorship (International Conference)	2025
Scholarship - PolyU Undergraduate Entry Scholarship	2024
Scholarship - Overseas Exchange Scholarship (CPCE, PolyU)	2024
Awards - Most Academic Award (X-Institute)	2023
Certification - Microsoft Certified: Azure AI Fundamentals	2021
Certification - Advanced Level Certificate in Mathematics Enrichment Programme (PolyU)	2021

VLEADERSHIP & PUBLIC SERVICE

Member, District Youth Development and Civic Education Committee *April 2025 – Present*
Home Affairs Department (HAD), The Government of the Hong Kong Special Administrative Region (HKGOV)

Student Member *October 2025 – Present*
Hong Kong Institute of Engineers (HKIE)

Student Representative of B.Eng. (Hons) Product and Industrial Engineering (45498-PIE) *September 2024 – Present*
Department of Industrial and Systems Engineering (ISE), PolyU

Member (Social Service Hours > 50 Hours) *December 2023 – Present*
Hong Kong Federation of Trade Unions (HKFTU)

Student Assistant *October 2024 – October 2025*
Knowledge Transfer and Entrepreneurship Office, PolyU

Student Assistant *March 2024 – May 2024*
Division of Science, Engineering & Health Studies, CPCE, PolyU

Student Ambassador (Social Service Hours > 30 Hours) *October 2023 – October 2024*
CPCE, PolyU

Student Representative of Associate in Statistics and Data Science (8C112-SDS) *September 2023 – August 2024*
Division of Science, Engineering, and Health Studies (SEHS), CPCE, PolyU

WORK EXPERIENCE

IT & Accounting Trainee

Royal Plaza Hotel (Accounting & IT Dept.)

December 2023 – January 2024

SKILLS AND INTERESTS

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/Consulting	Engineering Economics, Management and Organization, Marketing, Market Analysis, Engineering Law, Financial Modelling, Strategy frameworks (MECE, BCG Matrix, SWOT, Porter's Five Forces), market sizing, issue tracking, hypothesis-driven problem solving
Soft skills	Product & Industrial Design, Product Development, Project Management, Design Thinking, Design for Manufacturing (Optimizing, Manufacturing, Sustainability, etc.), Human-centered Design, Empathy Mapping, Customer Journey Mapping, Service Blueprinting, TRIZ, Stakeholder Mapping
Languages	Cantonese/Mandarin (Native), English (Fluent)

SUMMER SCHOOLS & TRAINING

- 1) Summer School on Mathematical Biology, Shanghai Jiao Tong University August 2025
- 2) AI Winter School 2025, Center for the Fundamental Physics of the Universe & Brown University January 2025
- 3) Social Innovation Training, Tsinghua University & X-Institute & ByteDance Ltd. & Accenture Co. Ltd. January 2025
- 4) 2024 Ministry of Education of PRC Teacher and Student Exchange Plan - Human-machine Shared Control Intelligent Car Project, Northeastern University & The Hong Kong Polytechnic University December 2024
- 5) X-Challenge 2024: Interdisciplinary Cutting-edge Disruptive Innovation, Tsinghua University & X-Institute June 2024 – July 2024
- 6) Hong Kong Student Exchange Program, Beijing Jiao Tong University May 2024
- 7) X-Idea 2023: X-Institute International Summer School, Tsinghua University & X-Institute June 2023 – July 2023

DECLARATION

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