Hongyi HUANG

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❊ EDUCATION

MSc in Financial Engineering *Jan. 2025 – Present*
WorldQuant University, Remote
❖**WAM:** 89 (to date)
❖**Main courses**: Financial Markets (89), Financial Data (89), Financial Econometrics (88), Derivative Pricing (90)

MSc in Advanced Computer Science (Artificial Intelligence) *Jun. 2023 – Sep. 2024*
University of Manchester, UK
❖**WAM:** 70
❖**Thesis:** "Music Generation of Guitar Tablature", supervised by Dr Tim Morris
The project focuses on symbolic music generation using the Guitar Pro format, aiming to enhance the expressiveness and diversity of generated music while addressing limitations inherent in current symbolic notations like MIDI, particularly in capturing complex guitar-playing techniques.

❖**Main courses:** Foundations of Machine Learning (74), Representation Learning (84), Cryptography (76), Cyber Security (78), Text Mining (69), Cognitive Robotics and Computer Vision (70)

B.Eng in Computer Science and Technology
Harbin University of Science and Technology (HRBUST)**,** P.R. China *Sept. 2018 – Jun. 2022*
❖**WAM:** 86.7
❖**Thesis:** "Canteen Payment System", supervised by Prof Jianhui Han
This project presents a hybrid edge–cloud, AI-augmented canteen payment system on Raspberry Pi 4B/Raspbian that fuses offline OpenCV face recognition with Baidu AI Cloud for accuracy enhancement and latency reduction, incorporates a time-division-multiplexed RFID multi-tag scheme for plate identification, and employs a multithreaded software pipeline with custom low-level algorithms to enable low-latency, high-throughput transactions with persistent data storage.

❖**Main courses:** Linear Algebra (95), The Foundation of the Programming Design (100), Java Program Language (96), Course Design: Principles of Computer Organization (95), Course Design: Operating System (95), Course Design: Data Structure, Embedded System Introduction Basics (92), Data Structure (100), Graduation Project: Computer Science (95)

❊ PUBLICATION

Bozhi, Z., **Hongyi, H.**, Xun, Z., Xiuming, L., Jingliang, H., Ningyang, X., Bin, L., Xiaozhu, S., Wei, L. (2025). The DLX1-NCS1-MYC axis drives oncogenesis and progression in lung adenocarcinoma. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease*, 1871(7), pp. 167967.

Luyao, Z., Shunfang, L., Jingliang, H., Zhongke, H., Lan, Z., **Hongyi, H.**, Qi, G., Dan, W., Lu, C., Xingyu, Z., Ruotong, L., Jiayun, W., Yizhou, S., Kaile, Z., Xiuming, L., Yulu, C., Xun, Z., Shaojie, M., Xiujun, W., Guofeng, X., Wei, L., Bin, L. (2024). Identification of MORF4L1 as an Endogenous Substrate of CRBN and Its Potential Role as a Therapeutic Target in Cancer. *Scientific Reports*, 15(1), pp. 2384.

Hongyi, H., Jianhui, H., Xiaowen, H., Feichi, H. (2021). Aliyun-based Data Storage. *Science and Technology Innovation and Application*, 11(23), pp. 50-52. [in Chinese]

❊ RESEARCH EXPERIENCE

Visiting scholar, supervised by Associate Prof Mingkai Zheng *March. 2025-Present*
Autoregressive 3D Object Generation
This project proposes a new loss function within logical space that can be applied to a pre-trained text-to-image model with a next-scale autoregressive structure. This method takes advantage of the coarse-to-fine nature of next-scale predictions, improving the consistency of 3D objects during generation and mitigating Janus problem.

Primary investigator, supervised by Prof Jianhui Han *Jun. 2020 – Oct. 2021*
Intelligent Food Delivery System
National College Students Innovation and Entrepreneurship Training Program No.202010214038, China
The project, utilizing ROS.AI, autonomous motion algorithm, and a deep learning-based network communication module, aimed to address challenges in food delivery within closed management environments.

✸ PRIZES & AWARDS

International Collegiate Programming Contest (ACM-ICPC)
❖**Silver Medal**, The 2020 ICPC Asia Nanjing Regional Contest   *Dec. 2020*
❖**Bronze Medal**, The 2019 ICPC Asia-East Continent Final Contest   *Dec. 2019*
❖**Honorable Mention**, The 2019 ICPC Asia Nanjing Regional Contest   *Oct. 2019*

China Collegiate Programming Contest (CCPC)
❖**1st Prize**, 14th Northeast Collegiate Programming Contest   *Oct. 2020*
❖**1st Prize**, 14th Heilongjiang Provincial Collegiate Programming Contest   *May. 2019*
❖**2nd Prize**, 13th Northeast Collegiate Programming Contest   *May. 2019*
❖**2nd Prize**, 15th Heilongjiang Provincial Collegiate Programming Contest   *Sep. 2020*

China College Computer Contest
❖**Gold Medal**, "Huashan Lunjian"Group in the National Final of 2020 China College Computer Contest - Group
Programming Ladder Competition   *Nov. 2020*
❖**Bronze Prize**, "Huashan Lunjian" Group in the National Final of 2019 China College Computer Contest - Group
Programming Ladder Competition   *Mar. 2019*

Lanqiao Cup National Software and Information Technology Professional Talent Competition
❖**3rd Prize**, C/C++ Design University Group A in 11th Lanqiao Cup National Software and Information Technology
Professional Talent Competition   *Nov. 2020*
❖**1st Prize**, C/C++ Design University Group A in Heilongjiang Division of 11th Lanqiao Cup National Software and
Information Technology Professional Talent Competition   *Oct. 2020*
❖**2nd Prize**, C/C++ Design University Group A in Heilongjiang Division of the 10th Lanqiao Cup National Software and
Information Technology Professional Talent Competition   *Mar. 2019*

College Students "Internet+" Innovation & Entrepreneurship Competition
❖**2nd Prize**, 7th Heilongjiang College Students "Internet+" Innovation & Entrepreneurship Competition   *Aug. 2021*
❖**3rd Prize**, 6th Heilongjiang College Students "Internet+" Innovation & Entrepreneurship Competition   *Aug. 2020*

✸ WORK EXPERIENCE

Backend Engineer Intern, SWD   *Feb. 2023 – May. 2023*
United Imaging Intelligence Co., Ltd., Shanghai
❖Led the research, development, deployment, and operation of the Maui platform, a comprehensive solution to address
data sharing and server allocation challenges among algorithm teams.
❖Developed and implemented the front-end and back-end of the system resource dashboard module, enabling users to
visually monitor software and hardware resource usage.
❖Engineered the front-end and back-end of the diagnostic report binding module and integrated DICOM files, image
files, and databases to provide algorithm engineers with a unified dataset for enhanced research.
❖Utilized Python and the Flask framework for backend development, and JavaScript with the React library for frontend
development. Deployed the Maui platform on servers using Docker to ensure efficient and scalable operation.

Engineer Intern, Information Technology Department   *Dec. 2019 – Jan. 2020*
AKAN Enterprise Group (Shanghai) Co., Ltd., Shanghai
❖Developed and maintained the warehouse management system, using Java for backend development and Spring Boot
for packaging and server deployment.
❖Maintained the low-code development platform and performed secondary development to meet business requirements.
❖Designed and maintained the company's network environment, configuring servers and building clusters to develop a
robust infrastructure.

✸ EXTRACURRICULAR EXPERIENCE

Principal   *Sep. 2020 – Jun. 2022*
Innovation Lab of Embedded Systems and Applications of HRBUST, Harbin

Student Leader   *Sep. 2019 – Jun. 2022*
Algorithm Programming Laboratory (ICPC/CCPC Team) of HRBUST, Harbin

✸ SKILLS

❖**Programming:** Python, Java, C++, HTML, MySQL, LaTeX

❖**Qualification:** [China Computer Federation Certified Science and Professional](#) (Scoring 310 of 500, ranking top 1.04%)

❖**Basic Algorithms:** Algorithms of Sort, Divide and Conquer, Randomized Algorithms, Dynamic Programming, Greedy Algorithms, Graph Algorithms, Computational Geometry, Number-theoretic Algorithms

❖**Other Skills:** Data Structures, Machine Learning, Deep Learning, Autonomous Technology, Database System, Computer Network, Operating System