Jihao Li

📞 (852) 96068934 / (86) 18022699391 | ✉ cuhk_ljh@126.com | 🔗 ljhOfGithub

🎓 Education

The Chinese University of Hong Kong　　Master of Science in Computer Science　　Sep 2024 – Nov 2025

• GPA: 3.3/4.0 | Academic Excellence Scholarship | IELTS: 6.5
• Relevant Courses: Efficient Computation for Deep Neural Networks, Cryptography Information Security and Privacy, Distributed Server Architectures

Beijing University of Posts and Telecommunications　　Bachelor of Engineering in Software Engineering　　Sep 2018 – Jul 2022

• GPA: 3.63/4.0 | National Endeavor Scholarship
• Relevant Courses: Data Structures and Algorithms, Computer Networks, Operating Systems, Computer Organization, Database Principles

📝 Publications

WaveU3S: A Lightweight Wavelet Dual-Attention Unet for 3D Medical Image Segmentation

T. Zhong, H. Yang, J. Li , M. Lyu, S. Liu | IEEE ISBI 2024

• Proposed the **first lightweight model integrating wavelet transform and dual-attention mechanisms for 3D medical segmentation**. Utilized **3D-DWT for lossless feature compression**, significantly reducing computational complexity from $O((HWD)^2C)$.
• Achieved **state-of-the-art performance** with an average Dice coefficient of **84.94%** on the FLARE22 dataset (13 organs) and ranked **first** on the ACDC cardiac dataset with **92.89%** average Dice.
• The model contains only **24.7M** parameters and **233.2 GFLOPs**, achieving a **44% reduction in parameters** compared to models with similar performance, significantly outperforming benchmarks like UNETR and nnFormer in efficiency.

SAStainDiff: Self-supervised Stain Normalization by Stain Augmentation using Denoising Diffusion Probabilistic Models

H. Yang, M. Lyu, S. Yan, T. Zhong, J. Li, T. Xu, H. Xie, S. Liu | Biomedical Signal Processing and Control 2025 (JCR Q1, CAS Q2)

• Proposed the **first self-supervised stain normalization method based on Denoising Diffusion Probabilistic Models (DDPM)**, addressing mode collapse and grid artifacts in GANs, enabling training **without paired data**.
• Achieved **state-of-the-art quantitative results** on the MITOS-ATYPIA'14 dataset: PSNR **22.591**, MS-SSIM **0.951**, surpassing all traditional and GAN-based methods.
• Downstream task validation: Improved accuracy to **89.7%** for lymphoma classification on **Camelyon16** and achieved a Dice coefficient of **87.9%** for colon gland segmentation on **GlaS**, demonstrating exceptional generalization capability.

🏛 Research & Projects

Research on Whole Slide Image-based Survival Prediction　　ljhOfGithub/SurvivalPredictionResearch

- Conducted a systematic review of **150+ publications**, analyzing the application of **64 state-of-the-art methods** in WSI survival prediction.
- Summarized and proposed a unified **three-stage framework**: Feature Extraction, Feature Aggregation, and Survival Analysis.
- Categorized methods from multiple dimensions: sampling strategies, feature encoders (self-supervised learning, transfer learning), aggregation methods (attention mechanisms, Transformers, Graph Neural Networks), and multi-modal fusion.
- Designed and conducted fair comparative experiments on **5 TCGA datasets**, evaluating **10 SOTA methods** using C-index and Kaplan-Meier analysis.
- Explored key challenges in computational pathology (e.g., annotation scarcity, interpretability) and future research directions.

Cryptocurrency Transaction Fraud Detection Tool   `ljhOfGithub/BachelorGraduationDesign`

- Built a scalable Ethereum fraud detection system based on **Machine Learning** and **Graph Neural Networks**.
- Collected and labeled **6,434 fraudulent addresses** and **18,401 normal addresses** from Etherscan, Bloxy, and CryptoScamDB.
- Designed **13 types of graph structure and transaction features**; baseline model achieved **85% recall**.
- Implemented and evaluated **GNN models**; TAGCN achieved **93.18% accuracy and 88.96% recall**.
- Applied **association conviction heuristics**, uncovering **33,664 suspicious nodes** and revealing fraud clusters.
- Analyzed **603 fraudulent promotion posts** on Twitter and Telegram to study fraud propagation patterns.

🗂 Work & Internship Experience

Full Stack Software Engineer   Future-T Technology HK Co. Ltd.   Sep 2024 – Nov 2025

- Designed and developed a campus-wide electronic form system for The University of Hong Kong, serving over **30,000 students and staff**.
- Built a driving school CRM, a tutoring class management system, and a rubber factory production process visualization system, serving **5,000+ clients**.
- Frontend developed using React stack, cumulatively wrote **40,000+ lines of frontend code** and **20,000+ lines of backend code**.

Java Backend Development Intern Beijing Ruizhi Technology Co., Ltd.   Apr 2024 – Jun 2024

- Built a model monitoring system based on Spring Boot framework, participated in developing the RuiDing Model Management Platform software.
- Improved interface response speed by **30%** through data metric analysis and optimization.

Research Assistant   Shenzhen Technology University   Sep 2023 – Apr 2024

- Responsible for research in computational pathology and histopathology image-based survival prediction modeling.

🛠 Technical Skills

Backend Development: Java Spring Boot, PHP Laravel, Golang

Frontend Development: React, Vue, TypeScript

Artificial Intelligence: PyTorch, Graph Neural Networks, Transformer

Blockchain: Solidity, web3.js, Ethereum

DevOps: Linux/Unix, MySQL, Git, Docker, Bash

Testing Tools: Selenium, Playwright, UI Automator

北京邮电大学

Beijing University of Posts and Telecommunications

Undergraduate Transcript

Name	LI Jihao		Gender		Male	
Student ID	2018211963		Class		2018211504	
Major	Software Engineering		School		School of Computer Science	
Student Type	Full-time Undergraduate	Date of Enrollment		201809	Date of Graduation	202206

Course Grade

Course Title	Credit	Grade	Course Type	Term
C Programming Language	2	85	Compulsory	2018Fall
Course Design of C Programming Language	1	83	Compulsory	2018Fall
Safety Education	0	Good	Compulsory	2018Fall
Undergraduate Psychological Health	0.5	88	Compulsory	2018Fall
Advanced Mathematics (I)	6	80	Compulsory	2018Fall
Military Skill Training	1	93	Compulsory	2018Fall
Introduction to Software Engineering Professional	2	79	Compulsory	2018Fall
Digital System Fundamentals	2	96	Compulsory	2018Fall
Training of Thought and Morality and General Knowledge of Law	3	93	Compulsory	2018Fall
Linear Algebra	3	90	Compulsory	2018Fall
Situation and Policies I	0.4	88	Compulsory	2018Fall
Integrated English A	3	86	Compulsory	2018Fall
Introduction to C++ Programming	2	85	Elective	2019Spring
Practice with Linux Configuration & Development tools	1	90	Compulsory	2019Spring
King of Intangible Cultural Heritage — Appreciation of Kunqu Opera	2	98	Optional	2019Spring
Advanced Mathematics (II)	5	84	Compulsory	2019Spring
Programming Practice Using C/C++	2	94	Compulsory	2019Spring
Hands on Experience on Computer	1	93	Compulsory	2019Spring
Computer Organization and Architecture	2	87	Compulsory	2019Spring
Course Design for Computer Organization and Architecture	1	87	Compulsory	2019Spring
Military Theory	1.5	99	Compulsory	2019Spring
Discrete Mathematics	4	88	Compulsory	2019Spring
Physical Education I	1	85	Compulsory	2019Spring
Situation and Policies II	0.4	92	Compulsory	2019Spring
The Course Introduction of Compendium of Chinese Modern History	2.5	85	Compulsory	2019Spring
The Course Introduction of Compendium of Chinese Modern History (Practice)	0.5	80	Compulsory	2019Spring
Integrated English B	3	81	Compulsory	2019Spring
Java SE Programming	3	77	Elective	2019Fall
Principles of Operating Systems	4	87	Compulsory	2019Fall
Design and Practice with Assembly Language	1	90	Compulsory	2019Fall
The Brief Introduction of Marxism	2.5	91	Compulsory	2019Fall
The Brief Introduction of Marxism (Practice)	0.5	85	Compulsory	2019Fall
Algorithms and Data Structures	2	85	Compulsory	2019Fall
Course Design of Algorithms and Data Structures	1	94	Compulsory	2019Fall
Formal Languages and Automata	2	88	Compulsory	2019Fall
Situation and Policies III	0.4	85	Compulsory	2019Fall

BEIJING UNIVERSITY OF POSTS AND TELECOMMUNICATIONS

Course Grade				
Course Title	**Credit**	**Grade**	**Course Type**	**Term**
About the Forbidden City	2	90	Optional	2019Fall
Probability Theory and Stochastic Processes	3	94	Compulsory	2020Spring
National Geographic Resources	2	90	Optional	2020Spring
Introduction to Mao Zedong Thought and the System of Theories of Socialism with Chinese Characteristics	4	86	Compulsory	2020Spring
Introduction to Mao Zedong Thought and the System of Theories of Socialism with Chinese Characteristics（Practice）	1	90	Compulsory	2020Spring
Human-computer interaction system and user interface design	2	92	Elective	2020Spring
Software Testing	2	93	Elective	2020Spring
Pragmatic Translation between English and Chinese	2	83	Elective	2020Spring
Principles of Database Systems	2	89	Compulsory	2020Spring
Course Design for Principles of Database Systems	1	92	Compulsory	2020Spring
Physical Education II	1	95	Compulsory	2020Spring
Situation and Policies IV	0.4	85	Compulsory	2020Spring
Practice of C# Programming	1	78	Compulsory	2020Fall
Java EE Programming Practice	3	85	Compulsory	2020Fall
Compiler Principle and Technology	3	86	Compulsory	2020Fall
Computer Networks	3	77	Compulsory	2020Fall
Object-Oriented Analysis and Design	2	81	Compulsory	2020Fall
The Theory and Practice of Software Engineering	3	82	Compulsory	2020Fall
Data Mining	2	87	Elective	2020Fall
Numerical Analysis and Computation	3	85	Elective	2020Fall
Algorithm Analysis and Design	2	89	Elective	2020Fall
Specialized Physical Education I	1	92	Compulsory	2020Fall
Design of Communication Protocol Software	2	80	Elective	2020Fall
Situation and Policies V	0.4	83	Compulsory	2020Fall
Big data principle and technology	2	86	Elective	2021Spring
Domain-Oriented Practice 1 - Mobile Service Software	1	95	Elective	2021Spring
Artificial Intelligence Go	2	84	Elective	2021Spring
Software Process Improvement	2	92	Elective	2021Spring
Software Project Management	2	92	Elective	2021Spring
Specialized Physical Education II	1	91	Compulsory	2021Spring
Network Security and Management	2	86	Elective	2021Spring
Next Generation Network Technology	2	88	Elective	2021Spring
Mobile App Development	2	81	Elective	2021Spring
Training on IT enterprise culture	1	93	Compulsory	2021Fall
Domain-Oriented Practice 2 - Mobile Service Software	3	87	Elective	2021Fall
Software enterprise training	8	88	Compulsory	2021Fall
Graduation Project	10	Good	Compulsory	2022Spring

Innovation and Entrepreneurship Education Grade				
Innovation and Entrepreneurship Education Course Title	**Credit**	**Grade**	**Course Type**	**Term**
Entrepreneurship Education	1	87	Compulsory	2019Fall
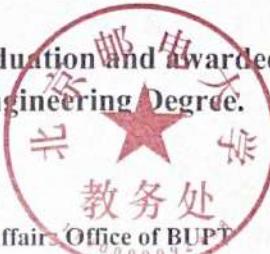
Credits Earned in University-level Innovation and Entrepreneurship Education: 4 , Grade : Excellent	
Credits Earned in School-level Innovation and Entrepreneurship Education: 6 , Grade : Good	

Minimum Credits Required for Graduation	165	**Qualified for graduation and awarded Bachelor of Engineering Degree.**
Total Credits Earned	165	
Weighted Average Score / Total Score	86.82/100	
GPA / Total Score	3.63/4.0	Seal: Academic Affairs Office of BUPT

NOTE:

（1） Beijing University of Posts and Telecommunications is a full-time accredited university directly under the administration of the Ministry of Education of the People's Republic of China. It offers four-year programs for bachelor's degree. The duration for the second bachelor's degree is two years.

（2） Four grading scales are adopted in the academic transcript: 100-point scale, 5-level ordinal scale(Excellent, Good, Average, Pass, and Fail), Binary scale(Good/Fail) and Exempted. Grades that are not obtained from first-time exams are marked with *.

（3） As for the 100-point scale, credits are granted for grades that are over 60 (60 included). Grade points = $4-3\times(100-X)\times(100-X)\div1600$ $(60\leq X\leq100)$, where X is the grade obtained under the 100-point system. Grade points is 4 for 100, 1 for 60, and 0 for grades below 60. For the 5-level ordinal scale, grades between 100-90 are Excellent; 89-80 are Good; 79-70 are Average; 60-69 are Pass, and grades below 60 are Fail. For the Binary scale, grades between 100-60 are Good, and those below 60 are Fail.

（4） As for the 5-level ordinal scale, credits are granted for grades at or above Pass. One hundred points grades are assigned as: Excellent=95, Good=85, Average=75, Pass=65, and Fail=59. Grade points are assigned as: Excellent=3.95, Good=3.58, Average=2.83, Pass=1.7, and Fail=0.

（5） As for the Binary scale, credits are granted for grades at Good. One hundred points grades are assigned as: Good=80, Fail=59. Grade points are assigned as: Good=3.25, Fail=0.

（6） Students could be exempted from certain courses upon passing specific tests and granted credits accordingly. The courses will be marked as "Exempted", without specific grades on the transcript.

（7） The weighted average equals to the sum of different course grades multiplied by credits, and divided by the sum of course credits. For grades applying 5-level ordinal scale or Binary scale, the weighted average shall be calculated after being converted to 100-point grades.

（8） Grade points average (GPA) equals to the sum of grade points multiplied by course credits, and divided by the sum of course credits. All course grades shall be converted into grade points before calculating GPA.

（9） Apart from courses marked as "Exempted" on the transcript, all courses (including Innovation and Entrepreneurship Education Courses) shall be included when calculating the weighted average score and GPA.

（10） The total grade for Innovation and Entrepreneurship Education includes two parts: courses and practice. This transcript only shows the total grade and the details of courses.

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