Huiyu Li

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EDUCATION

INRIA, Sophia Antipolis – PhD of Computer Science *2021 - 2024*
- Advisors**:** Hervé Delingette, Nicholas Ayache
- Research Interests**:** Generative Models, Medical Image Anonymization, Data Exfiltration Attacks

Beijing Institute of Technology (BIT) – Master of Computer Science *2018 - 2021*
- GPA**:** 86.78/100 (Top 25%)
- Research Interests**:** Deep Learning, Liver Tumor Segmentation, Distance Map

Qufu Normal University (QNU) – Bachelor of Computer Science *2014 - 2018*
- GPA**:** 90.57/100 (Top 1/126)

RESEARCH EXPERIENCE

Epione Team, INRIA *2021.9 - 2024.9*

INRIA, Sophia Antipolis, France
- A novel type of data exfiltration attack.
- An innovative framework for medical image anonymization.
- Thesis: Data Exfiltration and Anonymization of Medical Images based on Generative Models.

Beijing Lab of Intelligent Information Technology *2018.6 - 2021.7*

School of Computer Science, BIT, Beijing, China
- Deep distance map regression network to address the highly imbalanced issue.
- A novel three-stage curriculum learning approach for small object segmentation.
- Cooperation with other PhD students on "GGO detection in lung CT images" (CN109615016A).
- Cooperation with other PhD students on "Anchor-free Nodule Detection" (CN112132816A).

Computational Biology and Bioinformatics Laboratory *2020.5 - 2020.11*

School of Computer Science, Carnegie Mellon University, Pittsburgh, US
- Research Intern on deep learning based Cellular Electron Cryo-Tomograms (CECT) Segmentation

Intelligent Computing Laboratory *2015.9 - 2018.3*

School of Information Science and Engineering, QNU, Rizhao, China.
- Principal Investigator for College Student Innovation and Entrepreneurship Training Program (2015A059)
- Proposed an improved Particle Swarm Optimization method for colorectal cancer prediction.
- Participated in the Creative Challenge Cup competition and won the first prize at QNU.

RESEARCH PAPERS

[1] **Huiyu Li***, Nicholas Ayache, Hervé Delingette. Data Stealing Attack: Definition and Evaluation on Medical Image Data Lakes. 2025. (Under Review)

[2] **Huiyu Li***, Nicholas Ayache, Hervé Delingette. Generative Medical Image Anonymization Based on Latent Code Projection and Optimization. 2025 IEEE 22nd International Symposium on Biomedical Imaging (ISBI). IEEE, 2025.

[3] **Huiyu Li***, Nicholas Ayache, Hervé Delingette. Data Stealing Attack on Medical Images: Is It Safe to Export Networks from Data Lakes? Distributed, Collaborative, and Federated Learning, and Affordable AI and Healthcare for Resource Diverse Global Health. DeCaF FAIR, 2022. (Oral)

[4] **Huiyu Li**, Xiabi Liu*, Said Boumaraf, Xiaopeng Gong, Donghai Liao, Xiaohong Ma. Deep Distance Map Regression Network with Shape-aware Loss for Imbalanced Medical Image Segmentation. International Workshop on Machine Learning in Medical Imaging. Springer, Cham, 2020. (Oral)

[5] **Huiyu Li**, Xiabi Liu*, Said Boumaraf, Weihua Liu, Xiaopeng Gong, Xiaohong Ma. A New Three-stage Curriculum Learning Approach to Deep Network based Liver Tumor Segmentation. 2020 International Joint Conference on Neural Networks (IJCNN). IEEE. (Oral)

[6] **Huiyu Li**, Sheng-Jun Li*, Junliang Shang*, Jin-Xing Liu, Chun-Hou Zheng. A Dynamic Scale-Free Network Particle Swarm Optimization for Extracting Features on Multi-Omics Data[J]. Journal of Computational Biology, 2018: *26*(8), 769-781.

[7] **Huiyu Li**, Sheng-Jun Li*, Junliang Shang*, Jin-Xing Liu, Chun-Hou Zheng. An Improved Particle Swarm Optimization with Dynamic Scale-Free Network for Detecting Multi-Omics Features. [C]//International Symposium on Bioinformatics Research and Applications. Springer, Cham, 2018: 26-37. (Oral)

CONFERENCE PRESENTATION

• Medical Image Computing and Computer Assisted Intervention (MICCAI) conference, Singapore, 2022
• Medical Image Computing and Computer Assisted Intervention (MICCAI) virtual conference 2020
• The International Joint Conference on Neural Networks (IJCNN) virtual conference 2020
• The International Symposium on Bioinformatics Research and Applications (ISBRA)
  The only undergraduate student in the conference. Oral presentation, Beijing, China, June 8 - 11, 2018

TEACHING EXPERIENCE

Teaching Assistant for "Introduction to Medical Image Analysis", Master MVA 2021-2022 at INRIA, 2022.
Teaching Assistant for "Artificial Intelligence", undergraduate international student course at BIT, 2019.

ACADEMIC SERVICE

– Organizer of PhD seminars at Inria, 2021-2022.
– Organizer of the MOMI (Le Monde des Mathématiques Industrielles) workshop, 2022.
– Review of the TIFS (IEEE Transactions on Information Forensics and Security) journal.

AWARDS AND HONORS

Best Paper Award, the 3rd MICCAI Workshop on Distributed, Collaborative and Federated Learning (2022)
Excellent Graduate Award, QNU and Shandong Province (2018)
Excellent Student Award, QNU (Top 1%, the best award set by QNU, 2014-2016)
Best Undergraduate Thesis, QNU (2018)
First Prize of China Undergraduate Mathematical Contest in Modeling, Shandong Province (2017)
First-class Scholarship, QNU (2015-2017)
Pacemaker to Merit Student, QNU (2015-2016)

SKILLS

Computer: Python, Pytorch, Tensorflow, MATLAB, Ubuntu
Language: English (Fluent), Chinese (Native speaker)
Hobbies: Gardening, Skiing, Badminton, Writing, Ukulele