Yanjun Li

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Beijing, China

Education

- **Hokkaido University** *April 2022 - April 2025*
  Ph.D., Health Sciences Sapporo, Japan
- **The Australian National University** *July 2018 - June 2020*
  M.Eng., Mechatronics Canberra, Australia
- **Northestern University** *September 2013 - June 2017*
  B.Eng., Mechanical Engineering Shenyang, China

Experience

- **Fujitsu Research & Development Center Co., Ltd [🌐]** *May 2025 - Present*
  Researcher Beijing, China
  - Conduct research and development on Physical AI, with emphasis on spatial robotics and vision–language–action (VLA) intelligent systems.
- **Hokkaido University MIA Lab [🌐]** *April 2021 - March 2022*
  Research Student Sapporo, Japan
  - Studied and applied cardiac image analysis and annotation techniques, building proficiency in medical imaging workflows.
- **Seeing Machines** *February 2020 - September 2020*
  Data Analysis Intern Canberra, Auatralia
  - Supported data analysis tasks to improve model performance and validate results in an applied autonomous driving industry setting.

Projects

- **See the Unseen: Cross-Room Spatial Perception**
  May 2025 – Present
  - Developed a cross-room spatial perception framework that integrates feedforward vision transformers, segmentation-driven object understanding, and scene graph reasoning to infer global object relationships and robot localization from partial RGB observations, enabling perception of human activities and object interactions in unseen spaces.
- **Automated Extraction and 3D Reconstruction of RCA from CT Images Using Deep Learning**
  April 2024 – February 2025
  - Developed a GhostNet–Transformer-based pipeline for right coronary artery extraction and 3D reconstruction from CT images, achieving an F1 score of 0.897 on data from 32 patients.
- **YOLO-Based Attention-Enhanced Network for Coronary Artery Stenosis Localization**
  June 2023 – July 2024
  - Designed an attention-enhanced YOLO-based model for coronary stenosis localization, improving AP50 by up to 4.4% over YOLOv10-X, particularly on small-vessel lesions.
- **A Hessian-Based Preprocessing Method for Coronary Angiography Image Analysis**
  July 2022 – May 2023
  - Proposed a Hessian-based enhancement and image fusion preprocessing method, improving AP50 by approximately 5% across multiple state-of-the-art detection models.
- **A Computer-Aided Diagnosis System for Automated Quantification of RA Activity**
  April 2022 – October 2022
  - Developed a computer-aided diagnosis system for automated synovial space segmentation in rheumatoid arthritis ultrasound images, achieving an average accuracy of 0.9057.

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, S=IN SUBMISSION, T=THESIS

[J.1] Li Y, Yoshimura T, Horima Y, Sugimori H. (2024). **A preprocessing method for coronary artery stenosis detection based on deep learning.** *Algorithms*, 17(3), 119.

[J.2] Li Y, Yoshimura T, Horima Y, Sugimori H. (2024). **A Hessian-Based Deep Learning Preprocessing Method for Coronary Angiography Image Analysis.** *Electronics*, 13(18), 3676.

[J.3] Li, Y., Yoshimura, T., Sugimori, H. (2025). **Rapid Right Coronary Artery Extraction from CT Images via Global–Local Deep Learning Method Based on GhostNet.** *Electronics*, 14(7), 1399.

SKILLS

- **Programming Languages:** Python, MATLAB, ROS
- **Languages:** English (IELTS 7.5, 2020), Japanese

REFERENCES

1. **Hiroyuki Sugimori**
   Associate Professor, Faculty of Health Sciences
   Hokkaido University
   Email: sugimori@hs.hokudai.ac.jp
   Relationship: [Supervisor]

2. **Takaaki Yoshimura**
   Lecturer, Faculty of Health Sciences
   Hokkaido University
   Email: takaaki.ysm@med.hokudai.ac.jp
   Relationship: [Project Supervisor]

3. **Tamotsu Kamishima**
   Professor, Faculty of Health Sciences
   Hokkaido University
   Email: ktamotamo2@hs.hokudai.ac.jp
   Relationship: [Primary Examiner]