Hongmin Li

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Education

University of Tsukuba — Tsukuba, Japan
Ph.D., Computer Science. GPA 4.1/4.3 — March 2022
Tsukuba Scholarship recipient
M.A., Computer Science. GPA 4.0/4.3 — March 2019
Coursework in Machine Learning (A+), Evolution Algorithm (A +), Academic Writing (A).

University of Ningxia — Yinchuan, China
B.A., Electronic information engineering — June 2015

Research Experience

University of Tsukuba — Tsukuba, Japan
PhD Researcher — April 2019 – Now

- Developed a large-scale spectral clustering and ensemble algorithm which utilizes a divide-and-conquer based k-means to sample the representative data points to speed up the whole process.
- Developed a new ensemble clustering framework that simultaneously optimizes the base embeddings and consensus one to avoid the misclustering from k-means, improving 3~20% accuracy (ICDM 2020, accepted rate 19.7%)
- Developed a quick local hubness sampling method for Nystrom spectral clustering and improve 1~5% clustering accuracy in our experiment. (IJCNN 2020)

Master's Researcher — April 2017– March 2019

- Developed an eigenmap based oversampling algorithm to improve the 0.1~0.4 AUC of classifiers. (Neurocomputing)
- Developed an ensemble feature learning framework and bring more than 0.2 AUC. (IJMS)
- Develop distributed algorithm based on intermediate representation, protect privacy during algorithm execution, and feature selection of original data. (ICJAI 2019)
- Developed a sparse representative matrix by sampling through the topological relationship between the data, and the accuracy is improved by 2~10% compared with the current scheme. (CBDCom 2018, best paper award).

Leadership/Teamwork Experience

University of Tsukuba, Center for Artificial Intelligence Research — Tsukuba, Japan
Research assistant for Interdisciplinary Cooperation — October 2018 – Now

- Responsible for developing new algorithms, conducting experiments and weekly reporting
- Guided and trained new team members to follow up the project
- Presented work at local and interdisciplinary team meetings
- Adjusted and implemented the programs according to new feedbacks

Skills & Interests

Technical: Proficient in programming with MATLAB, Python, R; using Linux, Pandas, Sklearn
Language: Chinese (native), English (TOEIC 795), Japanese (N2)
Interests: Ancient Chinese history, Ancient Chinese books

Awards of AI Competition

- The second prize of 1st AETA Earthquake Prediction AI Algorithm Competition (2020)
- Special award in the 3rd Analysys International Algorithm Competition -PV, UV Prediction Competition (2019)

Publications and Presentations

- Publications: ICDM 2020 (accepted rate 19.7%), IJCNN 2020, Neurocomputing (2019), IJMS (2019), ICJAI 2019, CBDCom 2018 (best paper award)
- Conference Presentations: 2 oral presentations in international conference, 1 post presentation in the meeting of G20 Trade and Digital Economy Ministers