Jin Li

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EDUCATION

- **Heidelberg University, Germany, Msc in Scientific computing** 2015-2019
  - Heidelberg University: My major belongs to mathematics

- **Ocean University of China, China, BEng in Computer Science and Technology** 2010-2014
  - Ranking within **Top 1%**

WORKING EXPERIENCES

Chinese Academy of Science, Shenzhen Institutes of Advanced Technology (SIAT) May, 2019-present

- Research on computer vision task such as video action detection and classification
- Research on automatic speech recognition task, speech emotion recognition, speaker recognition, speaker verification, voice biometrics
- Follow the frontier of research methods and approaches

PUBLICATIONS

- **Jin Li**, Nan Yan, Lan Wang. Unsupervised Cross-lingual speech emotion recognition using pseudo multilabel
  https://arxiv.org/abs/2108.08663 Submitted to ASRU 2021
- **Jin Li**, Xurong Xie, Nan Yan, Lan Wang. Two Streams and Two Resolution Spectrograms Model for End-to-end Automatic Speech Recognition
  https://arxiv.org/abs/2108.07980 Submitted to ICASSP 2022

- **Jin Li**, Nan Yan, Lan Wang. FDN: Finite Difference Network with Hierarchical Convolutional Features for Text-independent Speaker verification https://arxiv.org/abs/2108.07974 Submitted to ICASSP 2022

RESEARCH AND PROJECTS

- **Topic: Speaker recognition for large-scale dataset, SIAT** Apr, 2021-present
  - Propose a novel plug-and-play module to incorporate speech speed into the model with raw wave input
  - The result outperforms current state-of-the-art works on the Voxceleb dataset
- **Topic: Multiscale spectrograms and multistream model for ASR, SIAT** Sep, 2020-Apr, 2021
  - Proposed mutlistream architecture with different scale features
  - A novel fusion design which aggregates two stream features
  - Outperformed all SOTA on HKUST telephone speech dataset
- **Topic: Unsupervised cross-lingual speech emotion recognition, SIAT** Sep, 2020-Apr, 2021
  - Proposed a novel framework with pseudo-labels in the target domain
  - An external memory design with memory update mechanism
  - Vastly exceed the baseline model with 17.77% improvement
- **Topic: Spatial-temporal action recognition, SIAT** May, 2019-Sep, 2020
  - Proposed a novel hierarchical attention for spatial-temporal action recognition model
  - Performance improvements compare with baseline model

- **Topic: Robust single object tracking via fully convolutional siamese network. Image Analysis and Learning Lab, HCI, Heidelberg University** Dec, 2018-Mar, 2019
  - Proposed an ensemble method to overcome drawback of fully convolutional siamese network
  - Enhanced feature representation by combining advantage of Conv-GRU unit with ground truth feature
- **Topic: Deep reinforcement learning for object tracking in videos. Image Analysis and Learning Lab, HCI, Heidelberg University** May, 2018-Jun, 2018
  - Re-implement YOLO and extract feature from FC1 as input into RNN
  - Utilize the advantage of RNN to memorize the location of object and predict the location of object in the next time frame
  - Model the tracking process by deep reinforcement learning method
- **Topic: Object tracking for general dataset. Image Analysis and Learning Lab, HCI, Heidelberg University**
  - Literature study for object detection problem
  - Re-implement “fully-convolutional siamese network for object tracking” paper and analysis the advantages and disadvantages. And also propose advice that might improve the model.
  - Re-implement “Recurrent Filter Learning for Visual Tracking” paper and analysis the advantages and disadvantages. Also, propose advice that might improve the model.
- **Topic: Object tracking for mice. Image Analysis and Learning Lab, HCI, Heidelberg University** Nov, 2017-Feb, 2018

- Build novel model using U-Net for biological dataset tracking problem especially for mice tracking
- Implement and apply U-Net for mice tracking
- Compute and utilize vector fields as feature for U-Net
- Train the U-Net then predict vector field in order to solve object overlapping problem

➢ **Topic: Hyperparameter tuning using Gaussian Process. Image Analysis and Learning Lab, HCI, Heidelberg University** Jul, 2017-Sep, 2017

- Solve nonlinear regression problem using Gaussian Process
- Binary and multi-class classification tasks using Gaussian Process
- Bayesian optimization in multi-dimensional case
- Tune hyperparameters of prediction model using Bayesian optimization in high dimension

➢ **Topic: Semi-supervised learning for art gallery. Computer Vision Lab, HCI, Heidelberg University** Feb, 2017-May, 2017

- Similarity learning by deep learning method for duplicates detection
- Combine a few art galleries of the Internet and get rid of duplicates among them using pre-trained AlexNet

➢ **Topic: Web-Based Convolutional Neural Networks for Cell Classification**

Biomedical Computer Vision Group, Heidelberg University WS2016/2017

- To classify cells, whether normal or phenotype
- Web-based implementation and Implement CNN using JavaScript

➢**Topic: Recognition of Vehicle's License Plate Based on Neural Networks**

- Project supported by the chairman foundation (Grant No. 2013CX006)

- Design the BP Neural Networks recognition module and implement it

PROFESSIONAL PRACTICE

- Participated in The ACM/ICPC of Shandong Province Jun, 2012
- Participated in The Freescale Cup Intelligent Car Racing Jun, 2012
- Participated in China Undergraduate Mathematical Contest in Modeling Sep, 2011

HONORS AND AWARDS

- Best Bachelor Thesis in Shandong Province (Top 0.1% in the University) May, 2015
- National Scholarship of China (Top 0.1% students in University) Dec, 2012
- Good morality and Social Practice Scholarship Sep, 2012
- The First-Class Scholarship Sep, 2011
- Professional Practice and Diathesis Developing Scholarship Sep, 2011

INTERESTS

- A big fan of Marathon and hiking
- Amateur badminton and ping-pong player