

Wenbo Huang



INFORMATION

24 years old | Nanjing, Jiangsu | 15195981486 |
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EDUCATION

2019.9-present
Nanjing Normal University
Master's Degree in Control Science and Engineering

2019.6-2014.7
Nanjing Tech University
Bachelor's Degree in Automation

Publication

- **Wenbo.Huang**, Lei.Zhang*, Qi.Teng, et al. *The Convolutional Neural Networks Training with Channel-Selectivity for Human Activity Recognition Based on Sensors*, **Early Access, IEEE Journal of Biomedical and Health Informatics**(Old Name : IEEE Transactions on Information Technology in Biomedicine, CCF Rank C , IF=5.772 , DOI: 10.1109/JBHI.2021.3092396), 2021.
- **Wenbo.Huang**, Lei.Zhang*, Wenbin.Gao, et al. *Shallow Convolutional Neural Networks for Human Activity Recognition using Wearable Sensors*, **Early Access, IEEE Transactions on Instrumentation and Measurement**(IF=4.016 , DOI: 10.1109/TIM.2021.3091990), 2021.
- **Wenbo.Huang**, Lei.Zhang*, Shuoyuan.Wang, et al. *Deep Ensemble Learning for Human Activity Recognition Using Wearable Sensors via Filter Activation*, **Under Review, Elsevier Knowledge-Based Systems**, 2021.
- Wenbin.Gao, Lei.Zhang*, **Wenbo.Huang**, et al. *Deep Neural Networks for Sensor Based Human Activity Recognition Using Selective Kernel Convolution*, **Accept, IEEE Transactions on Instrumentation and Measurement**(IF=4.016, DOI: 10.1109/TIM.2021.3102735), 2021.
- Shige.Xu, Lei.Zhang*, **Wenbo.Huang**, et al. *Deformable Convolutional Networks for Human Activity Recognition Using Wearable Sensors*, **Under Review, IEEE Transactions on Multimedia**, 2021.
- Xing.Wang, Lei.Zhang*, Wenbo.Huang, et al. *Deep convolutional networks with tunable speed-accuracy trade-off for human activity recognition using wearables*, **Under Review, IEEE Transactions on Biomedical Engineering**, 2021.
- Chaolei.Han, Lei.Zhang*, Yin.Tang, **Wenbo.Huang**, et al. *Human Activity Recognition Using Wearable Sensors by Heterogeneous Convolutional Neural Networks*, **Under Review, Elsevier Expert Systems with Applications**, 2021.
- Shuoyuan.Wang, Lei.Zhang*, Xing.Wang, **Wenbo.Huang**, et al. *A novel all-MLP architecture for real-time human activity recognition in wearable devices*, **Under Review, Elsevier Future Generation Computer Systems**, 2021.

Patent

- 《A method of human activity recognition based on channel selection convolution neural network for wearable devices》 CN111860191A

- 《Human activity recognition system based on channel selection convolution neural network》 2020SR0688827
- 《Human activity recognition system based on CBAM attention channel selection convolutional neural network》 2020SR0866826
- 《Human activity recognition system based on residual channel selection convolution neural network》 2020SR0866812

HONORS & AWARDS

In 2021, the 17th "Challenge Cup" National University Student Extracurricular Academic Science and Technology Works Competition "Science and Technology" Special Competition Provincial Third Prize

Skill

- **Coding:** proficient in using numpy, pandas, scikit learn and other Python libraries
- **Language:** CET-4 525, CET-6 499
- **Improving the mathematics and algorithm foundation of learning:** data structure, calculus, probability and statistics, matrix theory, machine learning (Zhou Zhihua), deep learning (cs231n)

Summary

- During the master's degree, under the guidance of the tutor, he mainly engaged in the research of human motion recognition algorithm based on wearable sensing equipment. It had the ability of reading and writing English articles. During reading, he could actively track the top papers such as CVPR, NIPS, ICML, seriously analyze Github code, customary paper with code mode, pay attention to the official account of the machine, and master the skills of LaTeX paper typesetting.
- Proficient in Python language, master pytorch, tensorflow, keras and other deep learning framework, seriously studied cs231n and other deep learning courses during the master's degree, and participated in the horizontal project of machine vision direction of the research group (Suzhou Futai Information Technology Co., Ltd., garbage classification video processing system based on deep learning).
- At present, we mainly study the method to deal with the redundant channels in convolution core, so that the model can be deployed in the mobile terminal more efficiently and achieve the goal of high precision and low consumption. Research experience includes channel selection algorithm research on wearable devices, human posture recognition using channel communication algorithm on wearable devices, channel grafting Algorithm Research on wearable devices, etc.
- As a laboratory administrator, he can skillfully use the Ubuntu operating system and be responsible for the maintenance of laboratory deep computing server (5 RTX3090, 1 RTX2080ti, 1 GTX1080ti).
- Have team spirit, enthusiasm, self motivation, aspire to long-term development in the field of machine learning, artificial intelligence, hope to be able to publish academic papers at the top conference in the field of machine learning under the guidance of tutors.
- My homepage is <https://wenbohuang1002.github.io/>