SHENG HUA (华盛)

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Website: https://dreamerhua.github.io/
Live in Haidian District, Beijing, China

EDUCATION

Master in **ShanghaiTech University**, Communication Engineering 2018.9~2021.6
- School of Information Science and Technology, GPA 3.63/4 Shanghai, China
- Receive the master's degree from the University of Chinese Academy of Sciences[1]
- Advised by Yuanming Shi & Yong Zhou

Bachelor in **Xidian University**, Internet of Things Engineering 2014.9~2018.6
- School of Computer Science, Rank 1/30, GPA 3.7/4 Xi'an, China
- Advised by Xiaoke Ma

RESEARCH INTERESTS

- Artificial Intelligence, Machine Learning, Optimization, Natural Language Processing

PROFESSIONAL EXPERIENCE

Algorithm Engineer, Shanghai Huawei Technologies Co., Ltd. **2021.7~2024.6**

1. Ultra-Precision Motion Control System (Commercial Project)

Role: Module Leader & Core Developer
- Optimized data acquisition mechanism to significantly boost data logging efficiency.
- Implemented lossless data logging at 40kHz ultra-high frequency within a real-time operating system (RTOS) ultra-low latency environment.

2. Network Throughput Enhancement (Commercial Project)

Role: Algorithm Innovator
- Spearheaded the shift from heuristic to neural network algorithms for reliable prediction of wireless channel quality.
- Elevated upstream user transmission rates by 5-10%.
- Commercialized in 2023, benefiting over 10,000 global 5G sites.

3. Network Throughput Enhancement (Research Project)

Role: Algorithm Innovator
- Proposed and demonstrated the potential of LSTM networks for precise network traffic prediction.
- Enhanced user experience by more than 10%.

TEACHING EXPERIENCE

As a Teaching Assistant for Undergraduate Course
- Probability Theory and Mathematical Statistics Fall 2019

[1] ShanghaiTech university is partly affiliated with the Chinese Academy of Sciences. At the time of my graduation in 2021, it had not yet obtained the qualification to independently confer master's degrees in this discipline.

RESEARCH

Click Here to See My Google Scholar Web Page.

Journal Publications

1. **Sheng Hua**, Yong Zhou, Kai Yang, Yuanming Shi, and Kunlun Wang. "Reconfigurable intelligent surface for green edge inference."*IEEE Transactions on Green Communications and Networking* 2021. (JCR Q1, IF=5.3) [link]
2. Xiangyu Yang, **Sheng Hua**, Yuanming Shi, Hao Wang, Jun Zhang, and Khaled B. Letaief. "Sparse optimization for green edge AI inference."*Journal of communications and information networks* 2020. (SJR Q1, IF=5.2) [link]

Peer-Reviewed Conference Proceedings

1. **Sheng Hua**, and Yuanming Shi. "Reconfigurable intelligent surface for green edge inference in machine learning." In *2019 IEEE globecom workshops (GC Wkshps)*, pp. 1-6. IEEE, 2019. [link]
2. **Sheng Hua**, Xiangyu Yang, Kai Yang, Gao Yin, Yuanming Shi, and Hao Wang. "Deep learning tasks processing in fog-RAN." In *2019 IEEE 90th Vehicular Technology Conference (VTC2019-Fall)*, pp. 1-5. IEEE, 2019. [link]
3. **Sheng Hua**, Kai Yang, and Yuanming Shi. "On-device federated learning via second-order optimization with over-the-air computation." In *2019 IEEE 90th Vehicular Technology Conference (VTC2019-Fall)*, pp. 1-5. IEEE, 2019. [link]

CONFERENCE PRESENTATIONS

1. On-Device Federated Learning via Second-Order Optimization with Over-the-Air Computation. Paper accepted at the *2019 IEEE 90th Vehicular Technology Conference*. (2019, September, Hawaii)
2. Deep Learning Tasks Processing in Fog-RAN. Paper accepted at the *2019 IEEE 90th Vehicular Technology Conference*. (2019, September, Hawaii)

SELECTED HONORS & AWARDS

As a Graduate Student 2018~2021

- Excellent Graduate Student 2021
- National Scholarship for Graduate Students 2020
- Outstanding Student 2019

As an Undergraduate Student 2014~2018

- Excellent Undergraduate 2018
- Special Scholarship 2017
- First Level Scholarship 2015, 2016

COMPUTER SKILLS

- Languages: Python, C, Matlab, Latex
- Skills: Web Crawler, Paddle-paddle, Data Analysis, TensorFlow