HONGHUI XU

Personal Website: https://honghuixu.netlify.app

 https://github.com/ahahnut ✉ hxu16@student.gsu.edu 📞(470)-417-6213

📍Department of Computer Science, Georgia State University, Atlanta, GA 30302

EDUCATION BACKGROUND

Georgia State University, Altanta, GA　　　　　　　　　　　**September 2019 - Present**

- **Major:** Computer Science
- **Degree:** Doctor of Philosophy
- **GPA:** 3.90/4.00
- **Supervisor:** Dr. Zhipeng Cai

University of Electronic Science and Technology of China, Chengdu, Sichuan　　　**September 2015 - June 2019**

- **Major:** Computer Science
- **Degree:** Bachelor of Engineering
- **GPA:** 3.90/4.00

RESEARCH INTERESTS

- **Fundamental Theory of Machine Learning:** Robustness of Machine Learning, Supervised Learning, Unsupervised Learning, and Probably Approximately Correct Learning Framework, Transfer Learning, Collaborative Learning, Federated Learning.
- **Applications of Deep Learning:** Computer Vision, Generative Adversarial Networks, Variational Autoencoders, Generative Adversarial Networks Based Image/Video Generation, Variational Autoencoder Based Image/Video Restoration.
- **Privacy-Preserving Machine Learning:** Differentially Private Machine Learning, Adversarial Training Based Privacy Preservation Models.

TEACHING EXPERIENCES

Lab Instructor, Georgia State University　　　　　　　　　　**June 2022 - Present**

- **CSc 3210:** Computer Organization and Programming

Lab Instructor, Georgia State University　　　　　　　　　　**September 2020 - May 2022**

- **CSc 1301:** Principle Of Programming For Data Science I
- **CSc 1302:** Principle Of Programming For Data Science II

PUBLICATIONS

<u>**Journal Publications:**</u>

1. **H. Xu**, W. Li, and Z. Cai, Analysis on methods to effectively improve transfer learning performance[J]. *Theoretical Computer Science*, 2022. `https://www.sciencedirect.com/science/article/pii/S03043397522005655`

2. **H. Xu**, Z. Cai, D. Takabi and W. Li, Audio-visual autoencoding for privacy-preserving video streaming[J]. *IEEE Internet of Things Journal (IoTJ)*, 2021, 9(3): 1749-1761. (Impact Factor: 9.936) `https://ieeexplore.ieee.org/iel7/6488907/6702522/09453730.pdf`

3. **H. Xu**, Z. Cai and W. Li, Privacy-Preserving Mechanisms for Multi-Label Image Recognition[J]. *ACM Transactions on Knowledge Discovery from Data (TKDD)*, 2022, 16(4): 1-21. (Impact Factor: 4.54) Link: `https://dl.acm.org/doi/pdf/10.1145/3491231`

4. **H. Xu**, Z. Cai, R. Li and W. Li, Efficient CityCam-to-Edge Cooperative Learning for Vehicle Counting in ITS[J]. *IEEE Transaction on Intelligent Transporation Systems (TITS)*, 2022, 23(9), 16600-16611. (Impact Factor: 2.534) Link: `https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9713742`

5. Z. Xiong, **H. Xu**, W. Li and Z. Cai, Multi-source adversarial sample attack on autonomous vehicles[J]. *IEEE Transactions on Vehicular Technology (TVT)*, 2021, 70(3): 2822-2835. (Impact Factor: 5.978) Link: `https://ieeexplore.ieee.org/iel7/25/4356907/09360457.pdf`

6. Z. Cai, Z. Xiong, **H. Xu**, P. Wang, W. Li and Y. Pan, Generative adversarial networks: A survey toward private and secure applications[J]. *ACM Computing Surveys (CSUR)*, 2021, 54(6): 1-38. (Impact Factor: 10.282) Link: `https://dl.acm.org/doi/pdf/10.1145/3459992`

7. S. De, **H. Xu**, M. Bermudez-Edo, Z. Cai, Deep Generative Models in the Industrial Internet of Things: A Survey[J]. *IEEE Transaction on Industrial Informatics (TII)*, 2022, 18(9): 5728-5737. (Impact Factor: 10.215) Link: `https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9726814`

8. Z. Kang, **H. Xu**, B. Wang, H. Zhu and Z. Xu, Clustering with Similarity Preserving[J]. *Neurocomputing*, 2019, 365(6), 211-218. (Impact Factor: 5.719) Link: `https://www.sciencedirect.com/science/article/pii/S0925231219310938`

9. M. Li, **H. Xu** and Y. Deng, Evidential Decision Tree based on Belief Entropy[J]. *Entropy*, 21(9), 897. Link: `https://www.mdpi.com/1099-4300/21/9/897/htm`

10. **H. Xu** and Y. Deng, Dependent Evidence Combination based on Decision-Making Trial and Evaluation Laboratory Method[J]. *International Journal of Intelligent Systems (IJIS)*, 34(7), 1555-1571. Link: `https://onlinelibrary.wiley.com/doi/pdf/10.1002/int.22107`

11. **H. Xu** and Y. Deng, Dependent Evidence Combination based on Shearman Coefficient and Pearson Coefficient[J]. *IEEE ACCESS*, 6, 2018. Link: `https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8218753`

Conference Publications:

1. **H. Xu**, Z. Cai and W. Li, Which Option Is a Better Way to Improve Transfer Learning Performance?[C]. *International Conference on Combinatorial Optimization and Applications (COCOA)*, Springer, Cham, 2021: 61-74. Link: `https://link.springer.com/chapter/10.1007/978-3-030-92681-6_6`

2. B. Xie, **H. Xu**, Z. Xiong, Y. Li and Z. Cai, A Self-Supervised Purification Mechanism for Adversarial Samples[C]. *2022 IEEE International Conferences on Internet of Things (iThings) and IEEE Green Computing & Communications (GreenCom) and IEEE Cyber, Physical & Social Computing (CPSCom) and IEEE Smart Data (SmartData) and IEEE Congress on Cybermatics (Cybermatics)*, 2022. `https://ieeexplore.ieee.org/abstract/document/9903202`

REVIEW EXPERIENCES

Participating the reviews of the following **Journals:**

- IEEE Transaction on Industrial Informatics (TII) (Impact Factor: 10.215)
- IEEE Transaction on Vehicle Technology (TVT) (Impact Factor: 5.978)
- IEEE Internet of Things Journal (IoTJ) (Impact Factor: 9.936)
- IEEE Transactions on Wireless Communication (TWC) (Impact Factor: 7.016)
- IEEE Access (Impact Factor: 3.367)
- IEEE Networking Letters
- Neurocomputing (Impact Factor: 5.719)
- High-Confidence Computing

Participating the reviews of the following **Conferences:**

- 2020 IEEE Global Communcations Conference (GLOBECOM 2020)

- 2022 EAI International Conference on Wireless Internet Conference (EAI WiCON 2022)