

# HONGHUI XU

🌐<https://github.com/ahahnut> ✉️📍Department of Computer Science, Georgia State University, Atlanta, GA 30302

## EDUCATION BACKGROUND

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**Georgia State University, Atlanta, 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

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- **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

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**Lab Instructor, Georgia State University**

**September 2020 - Present**

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

## PUBLICATIONS

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### Journal Publications:

1. **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>
2. **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>
3. **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 Transportation Systems (TITS)*, 2022. (Early Access) (Impact Factor: 2.534) Link: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9713742>
4. 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>

5. 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>
6. 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. (Accept) (Impact Factor: 10.215)

#### **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](https://link.springer.com/chapter/10.1007/978-3-030-92681-6_6)

#### **REVIEW EXPERIENCES**

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

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

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

- 2021 IEEE Global Communications Conference (GLOBECOM)