Yanzhao Wu

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EDUCATION

Georgia Institute of Technology, Atlanta, Georgia, USA

- Ph.D. student in Computer Science — Aug 2017 – May 2021 (expected)
  - Area: **Machine Learning** and Systems
  - Focus: Deep Learning & Big Data
  - Cumulative GPA: 3.88 / 4.00

University of Science and Technology of China (USTC), Hefei, Anhui, China

- Bachelor of Computer Science and Technology — Sep 2013 – Jul 2017
  - Graduated with **Honors**.
  - Cumulative GPA: 3.80 / 4.30

RESEARCH EXPERIENCE

High Accuracy and Efficient Inference of Deep Neural Network on Edge Devices

- Distributed Data Intensive Systems Lab, Georgia Tech — Aug 2019 – Present
  - Supervisor: Prof. Ling Liu
  - Focus: Deep Learning, Edge AI
  - Goal: Optimize deep neural network accuracy and inference time on edge devices.

Experimental Analysis and Optimization of Deep Learning Frameworks

- Distributed Data Intensive Systems Lab, Georgia Tech — Aug 2017 – Aug 2019
  - Supervisor: Prof. Ling Liu
  - Focus: Deep Learning Frameworks, Performance Analysis
  - Goal: Analyze the hyper-parameters and basic components of Deep Learning and optimize Deep Learning Frameworks by tuning data-related and hardware-related parameters.
  - Achievement: Papers published in ICDCS'18, BigData'18, IEEE TSC.

Accelerating Deep Learning with Direct-to-GPU Storage

- Storage Systems Research Group, **IBM Research** — May 2018 – Aug 2018
  - Mentors: Amit Warke, Dr. Daniel Waddington
  - Focus: Storage Systems, Deep Learning Frameworks
  - Achievement: Integrated the Direct-to-GPU storage system into Caffe to obtain **over 2**× performance improvement by reducing the overhead of data transmission.

DeepEyes: A Deep Learning Powered Localization System with Multi-modal Sensors

- Distributed Data Intensive Systems Lab, Georgia Tech — Aug 2017 – May 2017
  - Supervisor: Prof. Ling Liu
  - Focus: Localization, Deep Learning
  - Achievement: Implemented an out-door/in-door localization system **without requiring the common localization infrastructure**, such as GPS, cellular network, and WiFi, with the help of deep learning models.

PUBLICATION

- **Yanzhao Wu**, Ling Liu, Juhyun Bae, Ka-Ho Chow, Arun Iyengar, Calton Pu, Wenqi Wei, Lei Yu, Qi Zhang. "Demystifying Learning Rate Polices for High Accuracy Training of Deep Neural Networks" (Under submission)
- Ling Liu, Wenqi Wei, Ka-Ho Chow, Margaret Loper, Emre Gursoy, Stacey Truex, **Yanzhao Wu**. "Deep Neural Network Ensembles against Deception: Ensemble Diversity, Accuracy and Robustness" (Accepted by **IEEE MASS** 2019.)
- **Yanzhao Wu**, Ling Liu, Calton Pu, Wenqi Cao, Semih Sahin, Wenqi Wei, Qi Zhang. "A Comparative Measurement Study of Deep Learning as a Service Framework" (Accepted by **IEEE TSC**.)
- Ling Liu, Wenqi Cao, Semih Sahin, Qi Zhang, Juhyun Bae, **Yanzhao Wu**. "Memory Disaggregation: Research Problems and Opportunities" (**ICDCS'19**)
- Wenqi Wei, Ling Liu, Stacey Truex, Lei Yu, Mehmet Emre Gursoy, **Yanzhao Wu**. "Adversarial Examples in Deep Learning: Characterization and Divergence" (Under submission)
- **Yanzhao Wu**, Wenqi Cao, Semih Sahin, and Ling Liu. "Experimental Characterizations and Analysis of Deep Learning Frameworks" (**BigData2018**)
- Ling Liu, **Yanzhao Wu**, Wenqi Wei, Wenqi Cao, Semih Sahin, and Qi Zhang. "Benchmarking Deep Learning Frameworks: Design Considerations, Metrics and Beyond." In 2018 IEEE 38th International Conference on Distributed Computing Systems (ICDCS), pp. 1258-1269. IEEE, 2018. (**ICDCS'18**)
- Pengcheng Wang, Jeffrey Svajlenko, **Yanzhao Wu**, Yun Xu and Chanchal K. Roy. "CCAligner: a token based large-gap clone detector." In Proceedings of the 40th International Conference on Software Engineering, pp. 1066-1077. ACM, 2018. (**ICSE'18**)

SKILL

- Programming Skills: C, C++, Python, JavaScript, Java, Go, OpenMP, MPI, CUDA, SQL
- Tools: TensorFlow, Caffe, PyTorch, Torch, MXNet, Hadoop, Spark, LLVM, Git, Subversion, PRISM, LaTeX