Wenqi Wei

https://wenqiwei789.github.io/wwei66.github.io/

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Education

- **Georgia Institute of Technology** — Atlanta, GA
  Ph.D. student in Computer Science — *Aug. 2017 to present*
  Areas of interest:machine learning, privacy-preserving machine learning, data privacy.
- **Huazhong University of Science and Technology** — Wuhan, China
  Bachelor of Engineering in Electronics and Information Engineering — *Sept. 2013 to June. 2017*
  Graduated with Honors

  Cumulative GPA: 86.15 (ranking 17/185)

Research Experience

- **Georgia Institute of Technology** — Atlanta, GA
  Distributed Data Intensive Systems Lab — *advisor: Prof. Ling Liu*
  Graduate Research Assistant(Aug 2017 - present)
  - **Deep Learning**: Research on tuning neural network (hyper)parameters, designing new neural network models to produce better accuracy results. The coding is under TensorFlow.
  - **Generative Adversarial Network**: Research on how the adversarial model are generated and how to defend the attack caused by the perturbed data.
  - **Data Privacy**: Research on privacy-preserving deep learning, mainly using techniques from differential privacy. Hoping to protect data privacy.
- **Huazhong University of Science and Technology** — Wuhan, China
  Signal Processing and Information Networking in Communication Lab — *advisor: Prof. Pan Zhou*
  Undergraduate Research Assistant(Sept 2015 - June 2017)
  - **Online Learning**: Research on designing contextual multi-armed bandit-based recommendation for social network advertising big data. Also, I worked on designing a contextual X-armed bandit-based recommendation for self-diagnosis in ubiquitous healthcare.
  - **Differential Privacy**: Research on designing differentially private online learning algorithm for social network advertising big data to protect user's personal information while providing nearly accurate advertising recommendation. Also, I worked on designing a mechanism for large-scale spectrum sharing using techniques from differential privacy, hoping to protect the privacy of the user's personal information in spectrum sharing setting.
  - **Algorithmic Game Theory**: Research on mechanism design in an algorithmic game-theoretical way to improve utility for large-scale spectrum sharing. Considered truthfulness in the mechanism design to ensure users are reporting their real information to our aggregative spectrum sharing so that a approximate Nash Equilibrium is reached.

Publications

[1] P. Zhou, W. Wei(co-first author), K. Bian, D. O. Wu, Y. Hu, Q. Wang. Private and Truthful Aggregative Game for Large-Scale Spectrum Sharing. IEEE Journal on Selected Areas in Communications, 35(2), 463-477,2017.

Skills

- **Language**: Python, Tensorflow, C, HTML, SQL, Verilog HDL, assembly.
- **Tools**: matlab, Latex, Git, CCS(TI DSP), Quartus, Xilinx ISE, FPGA, SPSS.