SHAOCONG MA

CONTACT INFORMATION

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EDUCATION

PhD in Electrical and Computer Engineering **Sep.2019-Jun. 2023(Expected)**
University of Utah GPA:4.0/4.0
M.A. in Statistics **Sep.2017-Jun. 2019**
University of California, Santa Barbara GPA: 3.9/4.0
B.S. in Statistics **Sep. 2013-Jun. 2017**
Sichuan University GPA: 3.6/4.0

PUBLICATIONS

Shaocong Ma, Yi Zhou. *Understanding the Impact of Model Incoherence on Convergence of Incremental SGD with Random Reshuffle. ICML*. 2020. (Acceptance rate: 21.8%)

Shaocong Ma, Yi Zhou, Shaofeng Zou. *Variance-Reduced Off-Policy TDC Learning: Non-Asymptotic Convergence Analysis. NeurIPS. 2020.* (Acceptance rate: 20.1%)

Shaocong Ma, Ziyi Chen, Yi Zhou, Shaofeng Zou. *Greedy-GQ with Variance Reduction: Finite-time Analysis and Improved Complexity. ICLR. 2021.* (Acceptance rate: 28.7%)

PROJECTS

Medical Dataset Analysis: EEG-based Epilepsy Seizure Detection and Prediction

- Few-shot learning on highly unbalanced dataset (CHB-MIT Scalp EEG Database)
- Achieved 97.02% accuracy with 56.00% sensitivity.
- Designed and analyzed convolutional network structure for detecting and predicting epilepsy symptom.

Robust Image Classifier: Customized PyTorch Optimizer and Adversarial Attack

- Contributed to the experiments in the paper: A Convergent Single-Loop Proximal-GDA Algorithm with Momentum for Nonconvex Minimax Optimization (Submitted to ICML 2021)
- Implemented a customized PyTorch Optimizer for training the regularized Wasserstein robustness model (WRM)
- Applied GAN to generate the attacking data to improve the model robustness.

Garnet Problem Environment Simulator

- Designed and implemented an environment similar to OpenAI *gym* to support multi-cores acceleration and large-scale simulations.
- Contributed to the experiments in two top-conference papers: VRTDC and VR-greedy-GQ

TEACHING EXPERIENCES

Statistics; Statistics for Life Science; Statistics for Economics;
Survival Analysis; Actuarial Statistics; Fundamentals of Signals and Systems.