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: Improved Robustness via Regularized Wasserstein Robustness Model

- Proposed a new training strategy for the regularized Wasserstein robustness model (WRM)
- WRM is used to avoid the adversarial attack and improve the classifier robustness.
- Achieved around 20% faster convergence speed with almost same.

A Convergent Single-Loop Proximal-GDA Algorithm with Momentum for Nonconvex Minimax Optimization

- Submitted to ICML 2021.
- Built a GPU-based accelerating optimization environment.
- Implemented high-performance algorithms using PyTorch for solving large-scale min-max optimization problem.

TEACHING EXPERIENCES

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