

Qianli Shen

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🎓 Education

Peking University, China

July 2020

Bachelor of Science(B.S.) in Computer Science

🏢 Academic Experience

Research Intern at Huawei Technologies Noah's Ark Lab

July 2020 - present

Advisor: Dr. Chen Chen, [Prof. Jianye Hao](#)

Undergraduate Researcher at Center for Data Science, Peking University

Aug. 2018 – July 2020

Advisor: [Prof. Zhanxing Zhu](#)

Research Intern at Flash Lab, School of ISyE, Georgia Tech

July 2019 - Oct. 2019

Advisor: [Prof. Tuo Zhao](#)

📄 Publications

Deep Reinforcement Learning with Smooth Policy

Qianli Shen*, Yan Li*, Haoming Jiang, Zhaoran Wang, Tuo Zhao

International Conference on Machine Learning (ICML), 2020

Motivated by the fact that many environments with continuous state space have smooth transitions, we propose to learn a smooth policy that behaves smoothly with respect to states. We develop a new framework – Smooth Regularized Reinforcement Learning (SR2L), where the policy is trained with smoothness-inducing regularization. Our proposed framework can also improve the robustness of policy against measurement error in the state space.

🔧 Projects

Task Reweighting in Meta-Learning (Outstanding Undergraduate Thesis, top 10%)

Qianli Shen, Yan Zhang, Zhanxing Zhu

Existing meta-learning algorithms fail to survive biased training tasks where corrupted labels and class imbalance take place. We propose novel meta-learning algorithms **MAMLTRw**(MAML with Task Reweighting) and its meta-weight net version **MAMLMWN**(MAML with Meta-Weight Net) to overcome these issues.

🔑 Softwares

PRIMAL: An Linear Programming-based Sparse Learning Library in R and Python

Qianli Shen*, Zichong Li*, Yujia Xie, Tuo Zhao

We implement a unified framework of parametric simplex method for a variety of sparse learning problems(e.g., Dantzig selector for linear regression, sparse quantile regression, sparse support vector machines, and compressive sensing). Core algorithms are implemented in C++ with Eigen3 support for high performance linear algebra. We also construct user-friendly Python & R interfaces.

🖨️ Programming Skills

Program languages: C/C++, Python, R, Java, Verilog

Deep Learning Toolkits: Tensorflow, PyTorch

Others: Unix/Linux, \LaTeX , Markdown, Jupyter notebook

Honors and Awards

MCM/ICM 2018, Meritorious Winner (top 13%)