Reza Babanezhad Harikandeh

Curriculum vitae

Reza Babanezhad Harikandeh
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Google Scholar

Research Interest

My main research interests are: Stochastic Optimization, Generative Models, Game Optimization, and Reinforcement Learning (RL).

Work experience

Nov 2019-present

Samsung AI Lab, Montreal,Canada

Research Scientist Stochastic Optimization, Game Optimization, Causality, RL.

Aug-Nov 2019

Huawei, Montreal,Canada

ML Researcher Compression techniques to compress Deep Neural Networks

Sep-Dec 2017

Google Brain, Montreal,Canada

Research Intern in ML group Robust stochastic gradient descent

Jan-Apr 2017

Dwave System, Vancouver,Canada

Research Intern in ML group Understanding and improving generalization in Deep Neural Networks

Jun-Sept 2016

Inria research center, Paris, France

Research Intern (MITACS Globalink Award): Research Intern under supervision of **Francis Bach**, specifically working on stochastic algorithms using monotone operators for saddle point problem

2013-2014

Recon, Vancouver, BC, Canada

MITACS Intern: Enabling Spark as new big data processing engine for the company

2010-2011

Miad Company, Tehran, Iran

Software Designer, Developer, Documenter

2006-2009

Avaan Company, Tehran, Iran

Software Designer, Developer

Education

Aug 2020 – Jun 2022	**MILA** Post-doc
2014 – 2019	**Machine Learning group** PHD Computer Science *Computer Science, UBC*
2011 – 2014	**Software Practice Lab** MSc(and 1st year of PHD) Computer Science *Computer Science, UBC*
2008 – 2011	**Software group** M.Sc. Software Engineering *Software Engineering, Sharif University, Tehran/Iran*
2001 – 2006	**Software group** B.Sc. Software Engineering *Software Engineering, Sharif University, Tehran/Iran*

Publications

- J. L., S. V., R. B., M. S., N. L., Target-based Surrogates for Stochastic Optimization, OPTML workshop (NeurIPS 2022), submitted to AISTAT'23.
- B. D., S. V., R. B., Towards Noise-adaptive, Problem-adaptive (Accelerated) Stochastic Gradient Descent, ICML, 2022.
- A. J., S. V., R. B., C. S., D. P., Towards Painless Policy Optimization for Constrained MDPs, UAI, 2022.
- B. D., S. V., R. B., M. S., S. L. J., SVRG meets AdaGrad: Painless Variance Reduction, JML, 2022.

- L. L., Y. Z., Z. Y., R. B. , Z. W., Infinite-Dimensional Optimization for Zero-Sum Games via Variational Transport, ICML, 2021.
- R. L., B. R.,et al., An Analysis of Causal Models Adaptation Speed, AISTAT, 2021.
- V. S., B. R.,et al., To Each Optimizer a Norm, To Each Norm its Generalization, NeurIPS workshop on optimization, 2020.
- R.B., S. L. J., Geometry-Aware Universal Mirror-Prox, Arxiv, 2020.
- A. D, A. D. B. R.,et al., Reducing the variance in online optimization by transporting past gradients, NeurIPS,2019.
- D. A., B. E., B. R., Manifold Preserving Adversarial Learning, ArXiv, 2019.
- B., R., et. al., "MASAGA: A Linearly-Convergent Stochastic First-Order Method for Optimization on Manifolds", ECML, 2018.
- L. I., B. R.,et.al.,Domain Adaptation with Deep Metric Learning, ICML DAVU workshop, 2018.
- L. N., B. R. , et. al., Online Variance Reduction, ICLR workshop track, 2018.
- Z. Z., B. R. , Potinger, R., A Generic Top-N Recommendation Framework For Trading-off Accuracy, Novelty, and Coverage, ICDE, 2018.
- K. M. E., B. R., et. al., Faster Stochastic Variational Inference using Proximal-Gradient Methods with General Divergence Functions, UAI, 2016.
- B. R., et.al, Stop wasting my gradient: Practical SVRG, NIPS, 2015.
- S. M., B. R., et. al. , Non-uniform stochastic average gradient method for training conditional random fields. AISTAT 2015.
- E. W., B. R., Denormalization Middleware for Database-as-a-Service, SOCA 2013.
- B. R., Y. M., R. R., Process Pattern for Web Engineering, COMPSAC 2010.

Skills

Programming Language	Java, Python, Matlab
Tools	Apache Spark, Tensor-Flow
Language	English, Farsi

References

- Simon Lacoste-Jullien
- Mark Schmidt
- Francis Bach
- Nicolas Le-Roux
- Eric Wholfstadtre
- Raman Ramsin