Saeed **Soori**

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Research Interests

Distributed Optimization for Machine Learning, High Performance Computing, Cloud Computing, Parallel Programming

Education

University of Toronto , Ph.D., Computer Science	CGPA : 3.9/4	2019 - present	*Toronto, Canada*
Rutgers University, Ph.D., Electrical and Computer Engineering	CGPA : 3.9/4	2017 - 2019	*New Jersey, USA*
University of Tehran, M.Sc., Electrical and Computer Engineering	CGPA : 4/4	2013 - 2016	*Tehran, Iran*
University of Tehran, B.Sc., Electrical and Computer Engineering	CGPA : 3.63/4	2008 - 2012	*Tehran, Iran*

Skills

Languages	C++/C, Python, Scala, MATLAB, CUDA
Frameworks and Libraries	TensorFlow, MPI, Apache Spark
Developer Skills	Git and GitHub, Parallel Programming

Experience

Toronto University *Toronto, Canada*
GRADUATE RESEARCH ASSISTANT *Sep. 2019 - present*
- Design and implementation of memory efficient learning methods with MPI programming.
- Investigated training of deep neural networks and proposed bandwidth-efficient methods using quantization algorithms.
- Design and implementation of robust and scalable frameworks on cloud for machine learning applications.

Rutgers University *NJ, USA*
GRADUATE RESEARCH ASSISTANT *Jan. 2017 - Sep. 2019*
- Conducted and published research on distributed second order optimization with MPI programming.
- Collaborated and published paper with cross-institutional and interdisciplinary research team.
- Mentored undergraduate student to develop scalable learning algorithms in Spark.

University of Tehran *Tehran, Iran*
GRADUATE RESEARCH ASSISTANT *Sep. 2013 - Sep. 2016*
- Data analysis of market prices using learning algorithm in a real-world energy market.
- Design and implementation of CNC drawing machine with AVR.

Publications

- **ASYNC: A Cloud Engine with Asynchrony and History for Distributed Machine Learning**
  <u>Saeed Soori</u>, Bugra Can, Mert Gurbuzbalaban, and Maryam Mehri Dehnavi. The 34th International Parallel and Distributed Processing Symposium (IPDPS 2020).

- **DAve-QN: A Distributed Averaged Quasi-Newton Method with Local Superlinear Convergence Rate**
  <u>Saeed Soori</u>, Konstantin Mischenko, Aryan Mokhtari, Maryam Mehri Dehnavi, Mert Gurbuzbalaban. The 23rd International Conference on Artificial Intelligence and Statistics (AISTATS 2020).

- **MatRox: modular approach for improving data locality in hierarchical (Mat)rix App(Rox)imation**
  Bangtian Liu, Kazem Cheshmi, <u>Saeed Soori</u>, Michelle Mills Strout, Maryam Mehri Dehnavi. Proceedings of the 25th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP 2020).

- **Reducing Communication in Proximal Newton Methods for Sparse Least Squares Problems**
  <u>Saeed Soori</u>, Aditya Devarakonda, Zachary Blanco, James Demmel, Mert Gurbuzbalaban, and Maryam Mehri Dehnavi. In Proceedings of the 47th International Conference on Parallel Processing (ICPP 2018).

Awards

2019	**PLDI Conference**, Student Travel Grant	*AZ, USA*
2017	**Rutgers University**, Graduate Fellowship Award	*NJ, USA*