Gordon Euhyun Moon

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EXPERIENCE

Korea Aerospace University **Goyang, Korea**
Assistant Professor *March 2021–present*
Department of Artificial Intelligence and Department of Software

Sandia National Laboratories **Albuquerque, NM**
Postdoctoral Researcher *October 2019–January 2021*

EDUCATION

The Ohio State University **Columbus, OH**
Ph.D. in Computer Science & Engineering *2019*
Thesis: "Parallel Algorithms for Machine Learning"
Advisor: Professor Ponnuswamy Sadayappan
Committee: Professor Eric Fosler-Lussier and Professor Srinivasan Parthasarathy

Indiana University **Bloomington, IN**
M.S. in Computer Science *2013*

Yonsei University **Seoul, Korea**
B.S. in Computer Science & Industrial System Engineering *2011*

RESEARCH INTERESTS

Deep Learning, High-Performance Computing, and Deep Learning Accelerators

PUBLICATIONS

Gordon E. Moon, Hyoukjun Kwon, Geonhwa Jeong, Prasanth Chatarasi, Sivasankaran Rajamanickam and Tushar Krishna, "Evaluating Spatial Accelerator Architectures with Tiled Matrix-Matrix Multiplication,"
IEEE Transactions on Parallel and Distributed Systems (TPDS), 2022

Eric Qin, Geonhwa Jeong, William Won, Sheng-Chun Kao, Hyoukjun Kwon, Sudarshan Srinivasan, Dipankar Das, **Gordon E. Moon**, Sivasankaran Rajamanickam and Tushar Krishna, "Extending Sparse Tensor Accelerators to Support Multiple Compression Formats,"
Proceedings of the 35th IEEE International Parallel & Distributed Processing Symposium (IPDPS'21), 2021

Gordon E. Moon, J. Austin Ellis, Aravind Sukumaran-Rajam, Srinivasan Parthasarathy and P. Sadayappan, "ALO-NMF: Accelerated Locality-Optimized Non-negative Matrix Factorization,"
Proceedings of the 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'20), 2020 (acceptance rate: 216/1279 $\approx$ 16.9%, research track, oral and poster presentations)

Gordon E. Moon, Denis Newman-Griffis, Jinsung Kim, Aravind Sukumaran-Rajam, Eric Fosler-Lussier and P. Sadayappan, "Parallel Data-Local Training for Optimizing Word2Vec Embeddings for Word and Graph Embeddings,"
Proceedings of the IEEE/ACM 5th International Workshop on Machine Learning in High Performance Computing Environments (MLHPC'19), *held in conjunction with International Conference for High Performance Computing, Networking, Storage, and Analysis* (SC'19), 2019

Gordon E. Moon, Israt Nisa, Aravind Sukumaran-Rajam, Bortik Bandyopadhyay, Srinivasan Parthasarathy and P. Sadayappan, "Parallel Latent Dirichlet Allocation on GPUs,"
Proceedings of the 2018 International Conference on Computational Science (ICCS'18), 2018

Gordon E. Moon, Aravind Sukumaran-Rajam, and P. Sadayappan, "Parallel LDA with Over-Decomposition,"
Proceedings of the 2017 IEEE 24th International Conference on High Performance Computing Workshops (HiPCW'17), 2017

Gordon E. Moon and Jihun Hamm, "A Large-Scale Study in Predictability of Daily Activities and Places,"
Proceedings of the 8th EAI International Conference on Mobile Computing, Applications and Services (MobiCASE'16), 2016

PROFESSIONAL SERVICE

Program Committee Member

- *Tenth International Workshop on Accelerating Analytics and Data Management Systems Using Modern Processor and Storage Architectures* (*ADMS 2019*), August 2019

INVITED TALKS

Gordon E. Moon, "Deep Learning based Recommender Systems for Bicycling Route", NVIDIA GTC'21, A31282 - Regional Panel with Top Startups from Korea, Virtual Conference, November, 2021

Gordon E. Moon and Eric C. Cyr, "Parallel Training of an LSTM Network with a Multigrid Solver", SIAM Conference on Computational Science and Engineering (CSE'21), Virtual Conference, March, 2021

Gordon E. Moon, "Accelerated Computing for Machine Learning", Sandia National Laboratories, Albuquerque, NM, August, 2019

CERTIFICATION/SKILLS

- Proficient in deep learning frameworks such as PyTorch, TensorFlow, Theano, Caffe, etc.

- Proficient in parallel programming using OpenMP, MPI, CUDA, etc.

- Programming Languages Proficiency: C/C++, Python, Java, MATLAB, R, and MySQL

AWARDS/HONORS

Fall 2011–Spring 2012: Graduate Fellowship, Indiana University

Spring 2007: Dean's Innovation Award, Ecology-Friendly Devices for Comestibles Waste Treatment and Recycling, Yonsei University

VOLUNTEERING SERVICES

July 2007–June 2009: Military Services, Transportation Battalion, Sixth Army Corps Headquarters