Mete Kemertas

Email: kemertas@cs.toronto.edu Website: metekemertas.github.io

Education

University of Toronto, Vector Institute
PhD · Computer Science · Sep 2020 - Present
· GPA: 4.00/4.00. Focus in reinforcement learning and optimal transport.
· Supervisors: Allan D. Jepson, Amir-massoud Farahmand.

University of Toronto
MScAC · Computer Science · Sep 2016 - Dec 2017
· GPA: 4.00/4.00. Focus in machine learning and natural language processing.

McGill University
B.Eng. · Electrical Engineering · Sep 2013 - Dec 2015
· GPA: 3.58/4.00. Minor degree: Software Engineering.
· Transferred from Istanbul Technical University (Sep 2011 - Jul 2013).

Publications

Maximum entropy model correction in reinforcement learning.
A. Rakhsha, **M. Kemertas**, M. Ghavamzadeh, A.M. Farahmand.
International Conference on Learning Representations (ICLR), 2024.

Approximate policy iteration with bisimulation metrics.
M. Kemertas, A. Jepson.
Transactions on Machine Learning Research (TMLR), 2022.

CrispSearch: low-latency on-device language-based image retrieval.
Z. Hu*, L. Xiao*, **M. Kemertas***, C. Phillips, I. Mohomed, A. Fazly.
ACM Multimedia Systems Conference, 2022 (*equal contribution).

Towards robust bisimulation metric learning.
M. Kemertas, T.T. Aumentado-Armstrong (equal contribution).
Advances in Neural Information Processing Systems (NeurIPS), 2021.

Dependency parsing with structure preserving embeddings.
Á. Kádár, L. Xiao, **M. Kemertas**, F. Fancellu, A. Jepson and A. Fazly.
Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2021.

RankMI: A mutual information maximizing ranking loss.
M. Kemertas, L. Pishdad, K. Derpanis, and A. Fazly.
Conference on Computer Vision and Pattern Recognition (CVPR), 2020.

Dynamic scheduling of MPI-based distributed deep learning training jobs.
T. Capes, V. Raheja, **M. Kemertas**, and I. Mohomed.
MLSys Workshop at Neural Information Processing Systems (NeurIPS), 2018.

Preprints

Efficient and accurate optimal transport with mirror descent and conjugate gradients.
M. Kemertas, A. Jepson, A.M. Farahmand. arXiv URL

Patents

· US11645323 · Coarse-to-fine multimodal gallery search system
· US11430088 · Method and apparatus for data anonymization
· US11580392 · Apparatus for deep representation learning and method thereof
· US11693706 · Dynamic scheduling of distributed deep learning training jobs

Industry Experience

Samsung AI Centre · *Toronto, ON*
PhD Student Researcher (part-time) · Apr 2021 - Sep 2022
Senior Research Engineer · Mar 2020 - Sep 2020
Research Engineer · May 2018 - Mar 2020

· Research in machine learning and vision-language integration.
· Served as technical lead/co-lead for various research projects.
· Multiple publications at leading AI venues and 4 patents granted.

Tealbook Inc. · *Toronto, ON*
Machine Learning Engineer · May 2017 - May 2018

· Removed significant data licensing costs by applying machine learning to produce a large database of the world's suppliers.
· Designed and developed a recommendation engine for supplier discovery.

Ormuco Inc. · *Montreal, QC*
Software Developer · May 2016 - Sep 2016

· Developed the backend of a notification and messaging system.
· Improved system performance by optimizing database queries and redesigning the caching system on the server side.

Ericsson · *Montreal, QC*
Software Development Intern · May 2015 - Sep 2015

· Participated in the development of a global scale messaging product.

Awards

NSERC CGS D Scholarship, May 2022
Doctoral scholarship for $105,000 awarded to highest-scoring PGS D applicants.
Mitacs Accelerate Grant, May 2017
Awarded funding for $30,000 for an 8-month applied research project.

Community

· Referee for ICML '23, ICLR '23, NeurIPS '22, ICML '22, CVPR '22, ICCV '21.

Prog. Languages

· **Python** (expert)
· **Java, C, C++, C#** (proficient)
· **JavaScript, Swift, MATLAB, R** (prior experience)

Tools

PyTorch, TensorFlow, Git, Apache Spark, Unity, Apache Beam