

# Mete Kemertas

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## 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

### 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	<ul style="list-style-type: none"> <li>· US11645323 · Coarse-to-fine multimodal gallery search system</li> <li>· US11430088 · Method and apparatus for data anonymization</li> <li>· US11580392 · Apparatus for deep representation learning and method thereof</li> <li>· US11693706 · Dynamic scheduling of distributed deep learning training jobs</li> </ul>
Industry Experience	<p><b>Samsung AI Centre</b> · <i>Toronto, ON</i></p> <p><u>PhD Student Researcher (part-time)</u> · Apr 2021 - Sep 2022</p> <p><u>Senior Research Engineer</u> · Mar 2020 - Sep 2020</p> <p><u>Research Engineer</u> · May 2018 - Mar 2020</p> <ul style="list-style-type: none"> <li>· Research in machine learning and vision-language integration.</li> <li>· Served as technical lead/co-lead for various research projects.</li> <li>· Multiple publications at leading AI venues and 4 patents granted.</li> </ul> <p><b>Tealbook Inc.</b> · <i>Toronto, ON</i></p> <p><u>Machine Learning Engineer</u> · May 2017 - May 2018</p> <ul style="list-style-type: none"> <li>· Removed significant data licensing costs by applying machine learning to produce a large database of the world's suppliers.</li> <li>· Designed and developed a recommendation engine for supplier discovery.</li> </ul> <p><b>Ormucio Inc.</b> · <i>Montreal, QC</i></p> <p><u>Software Developer</u> · May 2016 - Sep 2016</p> <ul style="list-style-type: none"> <li>· Developed the backend of a notification and messaging system.</li> <li>· Improved system performance by optimizing database queries and redesigning the caching system on the server side.</li> </ul> <p><b>Ericsson</b> · <i>Montreal, QC</i></p> <p><u>Software Development Intern</u> · May 2015 - Sep 2015</p> <ul style="list-style-type: none"> <li>· Participated in the development of a global scale messaging product.</li> </ul>
Awards	<p><b>NSERC CGS D Scholarship, May 2022</b></p> <p>Doctoral scholarship for \$105,000 awarded to highest-scoring PGS D applicants.</p> <p><b>Mitacs Accelerate Grant, May 2017</b></p> <p>Awarded funding for \$30,000 for an 8-month applied research project.</p>
Community	<ul style="list-style-type: none"> <li>· Referee for ICML '23, ICLR '23, NeurIPS '22, ICML '22, CVPR '22, ICCV '21.</li> </ul>
Prog. Languages	<ul style="list-style-type: none"> <li>· <b>Python</b> (expert)</li> <li>· <b>Java, C, C++, C#</b> (proficient)</li> <li>· <b>JavaScript, Swift, MATLAB, R</b> (prior experience)</li> </ul>
Tools	<p><b>PyTorch, TensorFlow, Git, Apache Spark, Unity, Apache Beam</b></p>