# Mete Kemertas

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# Education

## University of Toronto

 $PhD \cdot Computer Science \cdot Sep 2020 - Present$ 

· Focus in reinforcement learning and computer vision.

# University of Toronto

 $MScAC \cdot Computer Science \cdot Sep 2016 - Dec 2017$ 

· Focus in machine learning and natural language processing.

## McGill University

B.Eng. · Electrical Engineering · Sep 2013 - Dec 2015

- · Minor degree: Software Engineering.
- · Served as a TA for MATH 270: Applied Linear Algebra for two semesters.

## Istanbul Technical University

B.Sc.  $\cdot$  Electronics and Communication Engineering  $\cdot$  Sep 2011 - Jun 2013

- · Transferred to McGill University.
- · Ranked 2nd in class before transfer.

## Publications

# 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.

# Patent Applications

- $\cdot$  US17/072905  $\cdot$  Coarse-to-fine Multimodal Gallery Search System with Attention-based Neural Network Models
- · US16/725717 · Feature Scrubbing: Anonymize Images on Home Devices
- · US16/805051 · A Method for Deep Representation Learning
- · US16/690999 · A System and Method of Batch Size Adaptive Workload Scheduler

Industry Experience

Samsung AI Centre · Toronto, ON

PhD Intern (part-time)  $\cdot$  Apr 2021 - Present

Senior Research Engineer · Mar 2020 - Sep 2020

Research Engineer  $\cdot$  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.
- $\cdot$  4 patent applications pending.

#### 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 using multimodal representation learning.

# Ormuco Inc. $\cdot$ Montreal, QC

Software Developer · May 2016 - Sep 2016

- · Developed the backend of a notification and messaging system.
- · Solved bugs in the backend of a cloud computing platform.
- · Improved system performance by optimizing database queries and redesigning the caching system on the server side.

 $\mathbf{Ericsson} \cdot Montreal, \ QC$ 

Software Development Intern  $\cdot$  May 2015 - Sep 2015

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

#### Awards

### Mitacs Accelerate Grant, May 2017

Awarded funding for \$30,000 for an 8-month applied research project.

Prog.

· Python (expert)

Languages

- · Java, C, C++, C# (proficient)
- · JavaScript, Swift, MATLAB, R (prior experience)

#### Tools

PyTorch, TensorFlow, keras, scikit-learn, pandas, Git,

Apache Spark, Unity, Apache Beam, Android Studio, neo4j