Timur Garipov

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Education

Massachusetts Institute of Technology **2019 – Present**
PhD student, Computer Science (MIT EECS), **GPA**: 5.0/5.0, Cambridge, MA, USA
Research advisor: Tommi Jaakkola
Minor: Robotic Manipulation, Underactuated Robotics

Lomonosov Moscow State University **2017 – 2019**
MS (hons.) in Applied Mathematics and Computer Science, **GPA**: 5.0/5.0 Moscow, Russia

Lomonosov Moscow State University **2013 – 2017**
BS (hons.) in Applied Mathematics and Computer Science, **GPA**: 5.0/5.0 Moscow, Russia
Undergraduate student researcher in the Bayesian Methods Research Group advised by Dmitry Vetrov

Experience

Cruise LLC **June 2023 – September 2023**
PhD Intern, AI Research Sunnyvale, CA, USA
- Design algorithms for long-tail recognition and uncertainty estimation with Vision Transformers.
- **Supervisor**: David Hayden

Google LLC **June 2021 – September 2021**
Research intern Cambridge, MA, USA (remote)
- Conducted research on empirical understanding of function-space training dynamics and memorization in deep learning.
- **Supervisor**: Chiyuan Zhang

Google LLC **June 2019 – September 2019**
Intern, Software Engineering London, UK
- Designed and prototyped a machine learning model for SKU price estimation.

Google LLC **July 2018 – September 2018**
Intern, Software Engineering Zurich, Switzerland
- Optimized a map-reduce data clustering pipeline.

Samsung AI Center in Moscow **April 2018 – June 2018, October 2018 – May 2019**
Engineer Moscow, Russia
- Conducted research in Deep Learning and Bayesian Machine Learning
- Published research papers at leading Machine Learning venues: NeurIPS, UAI.

Publications

Compositional Sculpting of Iterative Generative Processes **NeurIPS 2023**
Timur Garipov, Sebastiaan De Peuter, Ge Yang, Vikas Garg, Samuel Kaski, Tommi Jaakkola PDF

Adversarial Support Alignment *(Spotlight presentation)* | **ICLR 2022**
Shangyuan Tong, Timur Garipov*, Yang Zhang, Shiyu Chang, Tommi Jaakkola* Video PDF

The Benefits of Pairwise Discriminators for Adversarial Training *(Arxiv pre-print)* | **2020**
Shangyuan Tong, Timur Garipov*, Tommi Jaakkola* PDF

A Simple Baseline for Bayesian Uncertainty in Deep Learning **NeurIPS 2019**
Wesley Maddox, Pavel Izmailov*, Timur Garipov*, Dmitry Vetrov, Andrew Gordon Wilson* Video PDF

Subspace Inference for Bayesian Deep Learning **UAI 2019**
Wesley Maddox, Pavel Izmailov, Polina Kirichenko, Timur Garipov, Dmitry Vetrov, Andrew Gordon Wilson PDF

Loss Surfaces, Mode Connectivity, and Fast Ensembling of DNNs *(Spotlight presentation)* | **NeurIPS 2018**
Timur Garipov, Pavel Izmailov*, Dmitrii Podoprikhin*, Dmitry Vetrov, Andrew Gordon Wilson* Video PDF

Averaging Weights Leads to Wider Optima and Better Generalization *(Oral presentation)* | **UAI 2018**
Pavel Izmailov, Dmitrii Podoprikhin*, Timur Garipov*, Dmitry Vetrov, Andrew Gordon Wilson* PDF

Ultimate tensorization: compressing convolutional and FC layers alike **NIPS Workshop 2016**
Timur Garipov, Dmitry Podoprikhin, Alexander Novikov, Dmitry Vetrov PDF

*Equal contribution

Conference and Workshop Reviewing

ICML 2018 TADGM Workshop, NeurIPS 2018, ICLR 2019, ICML 2019, UAI 2019, UAI 2020, NeurIPS 2020 (top 10% reviewer award), NeurIPS 2021, AISTATS 2022, NeurIPS 2022

Teaching

Teaching assistant, MIT EECS **2020**
6.867: Machine Learning (graduate-level) Cambridge, MA, USA

Teaching assistant, CMC MSU and Yandex School of Data Analysis **2017, 2018**
Bayesian Machine Learning & Probabilistic Graphical Models Moscow, Russia

Lecturer, AESC MSU **2013 – 2015**
Advanced Algorithms and Data Structures | (high school elective course) Moscow, Russia

Instructor, competitive programming schools and camps for high school students **2013 – 2015**
Advanced Algorithms and Data Structures Russia

Awards

MIT EECS Graduate Alumni Fellowship **2019**
Russian State Scholarship for Academic Achievements **2014 – 2017**
Diploma of winner (16th place) at Russian Olympiad in Informatics **2013**
Diploma of awardee at Russian Olympiad in Informatics **2011, 2012**

Technical Skills

Languages: Python, C++, C, SQL
Machine Learning: PyTorch, JAX, SciPy stack, Tensorflow
Technologies/Frameworks: Linux, GitHub, Google Cloud Platform, Docker, Drake, LaTeX

Relevant Projects

Class project, MIT 6.832 (now 6.8210): Underactuated Robotics, **Instructor**: Russ Tedrake **Spring 2022**
Contact-Aware Lyapunov Controller Design via Alternating Optimization | joint work with Richard Li Video Report

Class project, MIT 6.843 (now 6.4212): Robotic Manipulation, **Instructor**: Russ Tedrake **Fall 2021**
Robotic Arm Weightlifting via Trajectory Optimization Video Report

Class project, MIT 6.850 (now 6.5320): Geometric Computing, **Instructor**: Piotr Indyk **Spring 2020**
Implementation of Algorithms for Construction of Voronoi Diagram Video Report