MIKHAIL PAUTOV

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EDUCATION

Ph.D. in Mathematics and Computer Science 2020 - Present
Skolkovo Institute of Science and Technology

M.Sc. in Mathematics and Computer Science[1] 2018 - 2020
Skolkovo Institute of Science and Technology

M.Sc. in Applied Mathematics and Physics[1] 2018 - 2020
Moscow Institute of Physics and Technology

B.Sc. in Applied Mathematics and Physics 2014 - 2018
Moscow Institute of Physics and Technology,
Kharkevich Institute for Information Transmission Problems, RAS (base department)

EXPERIENCE

Research Engineer — Skolkovo Institute of Science and Technology Nov. 2021 - Present
Computational Intelligence Lab. *Moscow, Russia*
- Industrial project about certified robustness of neural networks (with Huawei).
- Industrial project about trusted AI (ISP RAS).

Research Intern — Skolkovo Institute of Science and Technology Nov. 2020 - Nov. 2021
Computational Intelligence Lab. *Moscow, Russia*
- Industrial project about certified robustness of neural networks (with Huawei).

Scientific Consultant — Huawei Sep. 2019 - Aug. 2020
Intelligent Systems Lab. *Moscow, Russia*
- Research in the field of robustness of neural network based face recognition systems.

Teaching Assistant — Moscow Institute of Physics and Technology Sep. 2019 - Jun. 2020
Mathematical Foundations of Management Dept. *Moscow, Russia*
- Teaching assistance in Machine Learning course.
- Conducting practical classes, examination of students.

Research Intern — Huawei Jun. 2019 - Sep. 2019
Intelligent Systems Lab. *Moscow, Russia*
- Adversarial attacks on neural network based face recognition systems.

Mathematics Teacher — Moscow Institute of Physics and Technology Sep. 2017 - May 2018
Evening School of Physics and Technology *Moscow, Russia*
- Unified State Exam / Olympiads preparation of schoolchildren.

PUBLICATIONS

- Pautov, M., Kuznetsova, O., Tursynbek, N., Petiushko, A., & Oseledets, I. (2022). Smoothed Embeddings for Certified Few-Shot Learning. arXiv preprint arXiv:2202.01186.

- Pautov, M., Tursynbek, N., Munkhoeva, M., Muravev, N., Petiushko, A., & Oseledets, I. (2022, June). CC-Cert: A probabilistic approach to certify general robustness of neural networks. In Proceedings of the AAAI Conference on Artificial Intelligence (Vol. 36, No. 7, pp. 7975-7983).

- Pautov, M., Melnikov, G., Kaziakhmedov, E., Kireev, K., & Petiushko, A. (2019, October). On adversarial patches: real-world attack on arcface-100 face recognition system. In 2019 International Multi-Conference on Engineering, Computer and Information Sciences (SIBIRCON) (pp. 0391-0396). IEEE.

- Kaziakhmedov, E., Kireev, K., Melnikov, G., Pautov, M., & Petiushko, A. (2019, October). Real-world attack on MTCNN face detection system. In 2019 International Multi-Conference on Engineering, Computer and Information Sciences (SIBIRCON) (pp. 0422-0427). IEEE.

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[1] Joint M.Sc. program of MIPT and Skoltech.

PERSONAL INFORMATION

DOB / POB: December 06, 1996 / Ivanovo, Russia.
Citizenship: Russian.