Alexander Panfilov

kotekjedi@gmail.com | | | Tübingen, Germany

EDUCATION

IMPRS-IS / ELLIS | PhD Machine Learning
May 2024 – TBD | Tübingen, Germany

University of Tübingen | MSc Machine Learning
Oct 2021 – Apr 2024 | Tübingen, Germany

ITMO University | BSc Software Engineering
Sep 2017 – Jun 2021 | Saint Petersburg, Russia

RESEARCH EXPERIENCE

ELLIS Institute Tübingen | Doctoral Student
May 2024 – TBD | Tübingen, Germany

Jonas Geiping's Group (SEAL), co-supervised by Maksym Andriushchenko

- Successfully adapted discrete optimization jailbreaking attacks to a perplexity constraint, with results accepted for an oral presentation at the **NeurIPS 2024 Workshop (oral)** on Red Teaming GenAI.

MPI for Intelligent Systems / University of Tübingen | Research Assistant
May 2022 – Apr 2024 | Tübingen, Germany

Wieland Brendel's Group (RobustML)

- Proposed and implemented a novel regularization method enabling combinatorial generalization in object-centric models. Results accepted at **ICLR 2024 (oral)**, ranking in the **top 1.2%** of submitted papers.

ITMO University | Research Assistant
Nov 2019 – Oct 2021 | Saint Petersburg, Russia

Machine Learning Lab

- Contributed to research on exploiting simplicity bias for adversarial training and domain adaptation via optimal transport, with results published at the **ICML 2022 Workshop** on AdvML Frontiers and **CoLLAs 2023**.

Center for Learning Analytics

- Developed digital student profiles and engineered a machine learning system to predict academic outcomes and potential student expulsions aiding early intervention planning.

Robert Bosch | Research Intern
Jun 2020 – Nov 2020 | Saint Petersburg, Russia

- Worked on disentanglement in VAEs for identifying cost-effective yet high-performing motor designs.

INDUSTRY EXPERIENCE

X5 Group | Data Scientist
Nov 2020 – Oct 2021 | Moscow, Russia (remote)

- Designed and conducted A/B testing experiments to evaluate the efficacy of various business initiatives, performed ad-hoc analytics to support decision-making processes within Russia's largest offline retail chain.
- Mentored three interns, all subsequently securing full-time roles within the company.

Yandex | Machine Learning Engineer Intern
Feb 2020 – May 2020 | Moscow, Russia

- Optimized the push notification system at Yandex.Zen for personalized timing of notifications.

AWARDS

- **DAAD Scholarship (2021), Top 3%**: Selected as one of ∼30 Russian students from ∼1,000 applicants for a two-year DAAD-funded master's program in Germany.
- **"Ya-Professional" Student Olympiad Winner (2021), Top 2%**: Achieved prizeholder status in AI and ML tracks, with only 3,881 out of 177,100 participants (among all tracks) receiving this distinction.

PUBLICATIONS

- conference paper – equal contribution
  Provable Compositional Generalization for Object-Centric Learning
  Wiedemer, T.*, Brady, J.*, Panfilov, A.* , Juhos, A.*, Bethge, M., and Brendel, W.
  Accepted at ICLR 2024 (oral)

- conference paper
  A Minimalist Approach for Domain Adaptation with Optimal Transport
  Asadulaev, A., Shutov, V., Korotin, A., Panfilov, A. , Kontsevaya, V., and Filchenkov, A.
  Proceedings of The 2nd Conference on Lifelong Learning Agents, PMLR 232:1009-1024, 2023

- workshop paper
  Easy Batch Normalization
  Asadulaev, A., Panfilov, A. , and Filchenkov, A.
  ICML 2022 AdvML Frontiers Workshop, 2022

- workshop paper
  Multi-step domain adaptation by adversarial attack to $\mathcal{H}\Delta\mathcal{H}$ -divergence
  Asadulaev, A., Panfilov, A. , and Filchenkov, A.
  ICML 2022 AdvML Frontiers Workshop, 2022

- conference paper
  Recommender system for an academic supervisor with a matrix normalization approach
  Kazakovtsev, V., Oreshin, S., Serdyukov, A., Krasheninnikov, E., Muravyov, S., Bezvinnyi, A., Panfilov, A. , Glukhov, I., Kaliberda, Y., Masalskiy, D., Podolenchuk, T., and Khlopotov, M.
  Proceedings of The 2020 1st International Conference on Control, Robotics and Intelligent System (CCRIS '20)

- conference paper
  Implementing a Machine Learning Approach to Predicting Students' Academic Outcomes
  Oreshin, S., Filchenkov, A., Petrusha, P., Krasheninnikov, E., Panfilov, A. , Glukhov, I., Kaliberda, Y., Masalskiy, D., Serdyukov, A., Kazakovtsev, V., Khlopotov, M., Podolenchuk, T., Smetannikov, I., and Kozlova, D.
  Proceedings of The 2020 1st International Conference on Control, Robotics and Intelligent System (CCRIS '20)

- chapter
  The Use of Students' Digital Portraits in Creating Smart Higher Education: A Case Study of the AI Benefits in Analyzing Educational and Social Media Data
  Oreshin, S., Filchenkov, A., Kozlova, D., Petrusha, P., Lisitsyna, L., Panfilov, A. , Glukhov, I., Krasheninnikov, E. and Buraya, I.
  In: Uskov, V., Howlett, R., Jain, L. (eds) Smart Education and e-Learning 2020