Aleksandr V. Petrov

Recommender Systems Researcher with an Engineering Background

Email: a.petrov.1@research.gla.ac.uk (university), firexel@gmail.com (personal)

Skills:

- Recommender systems
- Information Retrieval
- Deep Learning, Neural Networks
- Natural Language Processing
- Large Language Models
- Generative Language models
- Software Engineering
- Big data Pipeline

Conference Publications: RecSys [1, 2], RecSys CARS [3], WSDM WebTour [4], ICAI [5]
Reviewer in Journals: TOIS, TKDD, Applied Soft Computing
Residence: Glasgow, UK
Languages: Russian - native, English - professional (C1/C2, IELTS 8.0), Spanish - intermediate.

Education & Research

The University of Glasgow – PhD (Recommender Systems)

10 2021 – now (expected graduation in 2025)

- PhD Supervisors: **Prof. Craig Macdonald** and **Prof. Iadh Ounis**.
- I focus on scaling state-of-the-art sequential recommendation approaches to large data sets, which are common in the real world.

Moscow State University – Specialist (master equivalent) – Computer Science

09 2006 – 09 2011

- Thesis topic: “Multi-Profile Spam Detection System”, excellent grade.

Scientific Publications

[1] Petrov, A. and Macdonald, C., 2022, September. **A Systematic Review and Replicability Study of BERT4Rec for Sequential Recommendation**. In *Proceedings of the 16th ACM Conference on Recommender Systems* (pp. 436-447). *https://dl.acm.org/doi/10.1145/3523227.3548487*

[2] Petrov, A. and Macdonald, C., 2022, September. **Effective and Efficient Training for Sequential Recommendation using Recency Sampling**. In *Proceedings of the 16th ACM Conference on Recommender Systems* (pp. 436-447). https://dl.acm.org/doi/10.1145/3523227.3546785

[3] Petrov, A., Safilo, I., Tikhonovich, D., Ignatov, D., 2022, September. **MTS Kion Implicit Contextualised Sequential Dataset for Movie Recommendation**. Presented at *the ACM Conference on Recommender Systems - Workshop on Context-Aware Recommender Systems (RecSys CARS 22), Seattle, USA*.
https://arxiv.org/abs/2209.00325

[4]Petrov, A., Makarov, Y., 2021. **Attention-based neural re-ranking approach for next city in trip recommendations**. In *Proceedings of the ACM WSDM WebTour 2021*, (pp. 41-45).
http://ceur-ws.org/Vol-2855/challenge_short_6.pdf

[5] Charnine, M., Petrov, A. and Kuznetsov, I., 2013. **Association-Based Identification of Internet Users Interest. In *Proceedings of the International Conference on Artificial Intelligence (ICAI)*** (p. 1). The Steering

Committee of The World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp).

Work Experience

Amazon.com (Edinburgh, UK) – Sr. Software Engineer; Applied Science Intern

09 2017 – 09 2021; 07 2022 - 10 2022

- I technically led various projects in recommender systems, search engine ranking, and personalised advertisement areas.
- I Led a research project on identifying brand competitors based on user behaviour.

E-Contenta (St. Petersburg Russia) – CTO

08 2013 (full-time from 03 2016) – 08 2017

I co-founded the startup. I have worked there part-time since 2013 and full-time since 2016.

- I Built a white-label recommender system for media companies (video-on-demand platforms, music streaming, and news companies).

Data-Centric Alliance (Moscow, Russia) – Head of R&D

10 2013 – 02 2016

- I Built several algorithms for internet users' market segmentation.

Tinkoff Digital (Moscow, Russia) – Data Platform Team Leader

10 2012 – 10 2013

- I Built a platform for customer segmentation.

Mail.Ru group (Moscow, Russia) – Research Engineer

04 2012 – 10 2012

- I developed a “car enthusiasts” segment detection method for advertising targeting.

Yandex (Moscow, Russia*)* – Software Development Engineer

09 2009 - 04 2012

- I Participated in the re-launch of the car traffic monitoring system.

Other activities

I created the first version of the “Applied Machine Learning” online course. https://skillfactory.ru/ml-programma-machine-learning-online, Russian Language. Successfully educated around 500 students.

I developed the first module of the “Big Data Specialist” offline course. https://newprolab.com/ru/bigdata/, Russian Language. The program is data engineering focused, first launched in 2015 and has been more than ten times.

I supervised Master’s students at the University of Edinburgh from 2018 to 2020. All student projects are about applying deep neural networks to recommend system problems.

I coached High School students in programming contests from 2007 to 2011. The students got awards in all-Russian programming competitions.