

Anton M. Alekseev

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Interests natural language processing, deep learning

Education **Computer Science Center**, St. Petersburg, Russia
Alumnus, two tracks: Data Science & Software Engineering
grad. 2014

St. Petersburg University, St. Petersburg, Russia
Specialist, the Faculty of Mathematics & Mechanics,
Applied Informatics in the field of International Relations,
grad. July 2014 *cum laude*, score 5.0/5.0

MOOCs

Social Network Analysis, UMich@Coursera, 2013

Functional Programming Principles in Scala, EPFL@Coursera, 2013

Teaching **Teaching assistant/Lecturer** **MCS SPbU**
Sept. 2020 – up to now St. Petersburg, Russia
Workshops for the courses of PGMs & DL (pytorch).
Lectures on NLProc (in Russian).

Lecturer **Computer Science Center**
Sep 2017 – up to now St. Petersburg, Russia
Lectures on Natural Language Processing in Russian.

- Topics: from string processing algorithms to *Transformer*-based models, two lectures a week.
- The design of tests and homeworks (with D. Bobrovnikov and G. Rozhkov).
- The course's syllabus, slides and videorecords are available [online](#)
Also: [YouTube playlist](#), [22 videos](#)

Visiting Lecturer **ITMO University**
Feb 2018 – May 2019 St. Petersburg, Russia
Lectures on Natural Language Processing in English.

- Topics: necessary mathematical and algorithmic toolkits, string processing, **machine learning in NLProc**: language modeling, text classification, duplicate detection, text clustering and topic modeling, modern distributional semantics, POS-tagging, named entities recognition, syntax parsing and statistical machine translation elements.
- The design of tests, homeworks (with K. Buraya) and written examination.

Visiting Teacher **Higher School of Economics**
Sep 2016 – Dec 2016 St. Petersburg, Russia
A short-term contract for teaching a programming workshop in Russian. Introduction into **Programming and Data Analysis** in Specialized Environments.

- Topics: introduction into Python [main part of the course], **NumPy**, **scipy.sparse matrices**, **basic Pandas**, regular expressions, parsing XML, CSV, JSON, introduction into **machine learning with scikit-learn**, GNU coreutils, a peek at `.git/.hg`
- Developed a new and an up-to-date introductory programming course programme: [course site @ HSE.ru](#), [course materials](#).

OTHER EXPERIENCE

Acting Junior Researcher

St. Petersburg Department of
Steklov Mathematical Institute RAS
St. Petersburg, Russia

Mar 2018 – up to now

[AI Laboratory](#), led by Sergey Nikolenko, PhD.

Text-based recommender systems, unsupervised aspect extraction, representation learning, user profiling.

Machine Learning Specialist

Native Media LLC

Oct 2016 – Feb 2018

St. Petersburg, Russia

Predictive services for native video advertising **nativeroll.tv**, from scratch.

Intelligent Systems Engineer

SofIT Labs LLC

Aug 2015 – Sep 2016

St. Petersburg, Russia

NLProc and information retrieval for customer-assisting services.

Intern → Software Engineer

Yandex

Feb 2013 – Aug 2015

St. Petersburg, Russia

Online reviews processing backend, then Yandex.Rabota.

Skills

Languages: Russian (Native), English (Advanced)

Programming Languages: Python, Scala, Java, bash, R (basic)

Tools: scikit-learn, keras, PyTorch, scipy, numpy, pandas, gensim

Online Classroom Platforms:

Stepik (online tests), repl.it (workshops, exam tests), Kaggle/Kaggle inClass

Other: L^AT_EX, HTML, CSS, Microsoft Office (Word, Excel, PowerPoint)

Data analysis contests

[DeepHack.Turing Summer School](#) Kaggle-based selection

Jul 24-30, 2017, Dolgoprudnyy, Russia.

About: <https://www.kaggle.com/c/human-or-machine-generated-text/leaderboard>

[SNA Hackathon 2014](#) 8th place @ online selection stage

spring 2014

About: <https://habr.com/ru/company/dmlabs/blog/217659/>

Kaggle profile: <https://www.kaggle.com/alexeyev>

Also I have an experience of hosting different kinds of Kaggle contests as homeworks for my students 2017-2021.

E.g., PoS-tagging: <https://www.kaggle.com/c/pos-punk>.

Schools

[Bayesian Methods in Deep Learning Summer School](#)

Aug 26-30, 2017, Moscow, Russia.

The 11th Russian Summer School in Information Retrieval

Aug 21-25, 2017, Yekaterinburg, Russia.

[DeepHack.Turing Summer school-hackathon](#) (Kaggle-based participants selection)

Jul 24-30, 2017, Dolgoprudnyy, Russia.

5th Lisbon Machine Learning School.

Jul 16-23, 2015, Lisbon. Portugal.

International Social Network Analysis Summer School (HSE)

Aug 8-13, 2014, St. Petersburg, Russia.

The 44-th International Youth School-Conference "Current problems in mathematics"

Jan 27 - Feb 2, 2013, Yekaterinburg

The 6th Russian Summer School in Information Retrieval.

Aug 6-10, 2012, Yaroslavl, Russia.

Talks

(published conference
papers presentations
are not included)

Open Information Extraction survey: key papers, tools and datasets [Russian]
(summer 2021, ML Network, 4 Aug. 2021)

Same Words, Different Tone:
Genre-Specific Sentiment Lexicons for Digital Music Reviews [English]
(winter 2019, LMAC-III, 17 Dec. 2019)

Unlemmatization: Recovering Word Forms in Morph. Rich Languages [English]
(autumn 2017, AINL: St. Petersburg, Russia, 20-23 Sept. 2017)

Natural Language Processing: Introduction [Russian]
(spring 2017, Kaggle Club)

How to build Yandex/Google from scratch? [Russian]
(summer 2016, Futurum STREAM Camp)

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RESEARCH PAPERS

- [1] A. M. Alekseev and S. I. Nikolenko. Recovering word forms by context for morphologically rich languages. *Zapiski nauchnykh seminarov POMI*, 499(0):129–136, 2021.
- [2] R. B. Galinskii, A. M. Alekseev, and S. I. Nikolenko. Word-based russian text augmentation for character-level models. *Zapiski nauchnykh seminarov POMI*, 499(0):206–221, 2021.
- [3] A. Savchenko, A. Alekseev, S. Kwon, E. Tutubalina, E. Myasnikov, and S. Nikolenko. Ad lingua: Text classification improves symbolism prediction in image advertisements. In *Proceedings of the 28th International Conference on Computational Linguistics*, pages 1886–1892, 2020.
- [4] A. Alekseev and S. Nikolenko. Recognizing preferred grammatical gender in russian anonymous online confessions. In Petr Sojka, Ivan Kopeček, Karel Pala, and Aleš Horák, editors, *Text, Speech, and Dialogue*, pages 222–230, Cham, 2020. Springer International Publishing.
- [5] A. Alekseev, E. Tutubalina, V. Malykh, and S. Nikolenko. Improving unsupervised neural aspect extraction for online discussions using out-of-domain classification. *Journal of Intelligent & Fuzzy Systems*, 39(2):2487–2496, 2020.
- [6] I. Shenbin, A. Alekseev, E. Tutubalina, V. Malykh, and S. I. Nikolenko. Recvae: a new variational autoencoder for top-n recommendations with implicit feedback. In *Proceedings of the 13th International Conference on Web Search and Data Mining, WSDM '20*, page 528–536, New York, NY, USA, 2020. Association for Computing Machinery.
- [7] V. Malykh, A. Alekseev, E. Tutubalina, I. Shenbin, and S. Nikolenko. Wear the right head: Comparing strategies for encoding sentences for aspect extraction. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 11832 LNCS:166–178, 2019.
- [8] S. I. Nikolenko, E. Tutubalina, V. Malykh, I. Shenbin, and A. Alekseev. Aspera: aspect-based rating prediction model. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 11438 LNCS:163–171, 2019.
- [9] A. Alekseev and S. Nikolenko. User profiling in text-based recommender systems based on distributed word representations. *Communications in Computer and Information Science*, 661:196–207, 2017.
- [10] A. Menshikova, D. Maglevanaya, M. Kuleva, S. Bogdanova, and A. Alekseev. Art critics and art producers: Interaction through the text. *Communications in Computer and Information Science*, 859:113–124, 2018.
- [11] A. Alekseev and S. Nikolenko. Word embeddings for user profiling in online social networks. *Computacion y Sistemas*, 21(2):203–226, 2017.
- [12] A. Alekseev and S. I. Nikolenko. Predicting the age of social network users from user-generated texts with word embeddings. *Proceedings of the AINL FRUCT 2016 Conference*, 2017.
- [13] R. Galinsky, A. Alekseev, and S. I. Nikolenko. Improving neural network models for natural language processing in russian with synonyms. *Proceedings of the AINL FRUCT 2016 Conference*, 2017.