Anastasiia Sedova

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https://anasedova.github.io

• @anasedova

in @anastasiia-sedova-82340118b

EDUCATION

Ph.D. in Computer Science

10/2020 - now

Data Mining & Machine Learning Research Group, University of Vienna

Vienna, Austria

- Advised by *Prof.Dr.Benjamin Roth*.
- Research interests: data-centric approaches in NLP, noisy & low-resource learning, model interpretability, model trustworthiness.

M.Sc. in Computational Linguistics (minor: CS)

10/2018 - 09/2020

CIS, University of Munich (LMU)

Munich, Germany

- GPA: 3,7 / 4,0. Thesis: "Bias Correction for Weak Supervision".
- Selected Courses: Knowledge Discovery and Data Mining, Machine Learning, Deep Learning for NLP, Machine Translation, Finite Automata.

B.Sc. in Computational Linguistics, Visiting Student

04/2016 - 09/2016

University of Potsdam

Potsdam, Germany

B.Sc. in Computational Linguistics Cum Laude

09/2013 - 08/2017

Saint Petersburg State University

Saint Petersburg, Russia

- GPA: 4,0 / 4,0. Thesis: "Topic Modeling based on Lemata and Lexical Constructions".
- Selected Courses: Mathematical Models of Language, Constructive Syntax, Structural Linguistics, Formal Semantics, Higher Mathematics, Probability Theory, Advanced Programming.

AWARDS & SCHOLARSHIPS

Full DAAD Scholarship for Master Study

10/2018 - 09/2020

A full scholarship for excellently qualified graduates awarded by the association of German institutions of higher education (DAAD); ca. 650 applicants yearly, 20% acceptance rate.

Top-10 Outstanding Students Award (Saint Petersburg State University)

09/2014 - 08/2017

Scholarship for Outstanding Foreign Students (University of Potsdam)

04/2016 - 09/2016

ACADEMIC EXPERIENCE

University of Vienna

04/2021 - present

I conduct research as a member of the Data Mining and Machine Learning research group, supervise BSc/MSc theses, and teach Bachelor & Master courses.

09/2021 - present

ACL, EMNLP, NAACL, EACL, ECML, IEEE PAMI, etc.

Professional EXPERIENCE

Google Summer of Code

05/2021 - 08/2021

Intern @DeepPavlov

DeepPavlov is an open-source conversational AI library. I implemented document-level relation extraction with automatic entity recognition and triplet extraction using Wikidata for English and Russian languages. [GitHub Gist]

Center for Information and Language Processing (LMU Munich)

06/2019 - 12/2019

Student Research Assistant

I was working in Hinrich Schütze NLP research group on developing methods for learning high-quality embeddings for rare words considering not only a word's surface form, but also relevant contexts.

Deutsche Telekom

08/2017 - 09/2018

Regression Test Lead

Regression team management. Software Acceptance Testing, Functional, UI, Manual & Automated Testing. High- and low-level test cases analysis & planning, risk analysis. SQL, XML, XSLT, Jenkins, TestBench, Jira, Confluence, Agile.

ABBYY

04/2015 - 09/2015

Research Intern

I participated in Open Corpora project - the most extensive annotated corpora for the Russian language (at that time).

Institute for Linguistics (Russian Academy of Sciences)

01/2014 - 01/2016

Research Assistant

I explored how the tradition of Russian dictionaries and scientific works have been establishing since the 18th century.

Lexicography Lab (Saint Petersburg State University)

10/2013 - 04/2016

Research Assistant

I participated in editing the regional dialects dictionaries.

Invited Talks & Research Visits

University of Munich

Germany, 04/2024

Invited Tutorial: "Weak Supervision for Information Extraction from Text" @ Department of Statistics.

University of Munich
Research Visit to the research group of Hinrich Schütze and Barbara Plank @ Center for Information and Language Processing.

Aalborg University (Copenhagen)

Denmark, 09/2023

Invited Tutorial: "Weak Supervision for Information Extraction from Text" @ Seminar "Machine Learning with Limited Data".

Technical University of Vienna

Invited Talk: "Weak Supervision: Possible Applications and Future Directions" @ NLP Seminar.

Austria, 11/2021

Austria, 01/2023

European Language Resource Coordination (ELRC)

Invited Presentation of Knodle framework @ ELRC Workshop.

Germany, 07/2021

Munich NLP Meetup

Invited Talk: "Knowledge-supervised Deep Learning" @ Knowledge Extraction & Knowledge-Supervised DL Meetup.

Germany, 05/2021

Invited Talk: "Knodle: Modular Weakly Supervised Learning with PyTorch" @ NLP and Semantic Reasoning Lab.

Selected Publications

Sedova A., Litschko R., Frassinelli D., Roth B., Plank B. (2024) Behavioral Testing: Can Large Lanquage Models Implicitly Resolve Ambiguous Entities? ArXiV preprint.

Kougia V., Sedova A., Stephan A., Roth B. (2024) Analysing zero-shot temporal relation extraction on clinical notes using temporal consistency. BioNLP Workshop @ The 62nd Annual Meeting of the Association for Computational Linguistics (ACL'24).

Xia Y., Sedova A., Araujo PHL, Kougia V., Nußbaumer L., Roth B. (2024). Exploring prompts to elicit memorization in masked language model-based named entity recognition. ArXiV preprint.

Sedova A., Roth B. (2023). ULF: Unsupervised Labeling Function Correction using Cross-Validation for Weak Supervision. The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP'23).

Sedova A., Zellinger L., Roth B. (2023). Learning with Noisy Labels by Adaptive Gradient-Based Outlier Removal. European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD'23).

Sedova A., Roth B. (2023). ACTC: Active Threshold Calibration for Cold-Start Knowledge Graph Completion. The 61st Annual Meeting of the Association for Computational Linguistics (ACL 23).

Sedova A., Stephan A., Speranskaya M., Roth B. (2021). Knodle: Modular Weakly Supervised Learning with PyTorch. Workshop on Representation Learning for NLP (RepL4NLP) @ The 59th Annual Meeting of the Association for Computational Linguistics (ACL'21).

Mitrofanova O., Sedova A. (2017). Topic Modelling in Parallel and Comparable Fiction Texts (the case study of English and Russian prose). XIX International Conference "Internet and Modern Society" (IMS'17).

Sedova A., Mitrofanova O. (2017). Topic Modelling of Russian Texts based on Lemmata and Lexical Constructions. "Information Technology and Computational Linguistics" (ITCL'17).

Teaching EXPERIENCE

In the Data Analysis Project, I led groups of students working on semester Project (e.g., proposing topics, drafting proposals, supplying literature, providing supervision, designing experiments, considering evaluation strategies, preparing possible follow-up works, etc.).

Summer Term 2024

Deep Learning for Natural Language Processing (MSc).

Data Analysis Project (MSc): Multilingual Parser for Under-resourced Languages. Data Analysis Project (MSc): Language Similarity by Multilingual Parsing Performance.

Introduction to programming (BSc).

Winter Term 2023/2024

Capabilities and Limitations of language-based AI models (MSc).

Data Analysis Project (MSc): A blessing or a curse? Analysis of scholarly citations.

Data Analysis Project (MSc): Cross-metric evaluation of fairness optimization.

Introduction to programming (BSc).

Summer Term 2023

Data Analysis Project (MSc): Recent Approaches to Authorship Attribution.

Data Analysis Project (MSc): Authorship Attribution Dataset based on the Reddit Threads.

Data Analysis Project (MSc): Counterfactual Reasoning with KG & Box Embeddings.

Data Analysis Project (MSc): Prompt-based Temporal Relation Extraction.

Winter Term 2022/2023

Computational Linguistics (MSc).

Data Analysis Project (MSc): Weak Supervision in Medical Domain.

Data Analysis Project (MSc): Incomplete Schema Clustering for the Relation Extraction.

Summer Term 2022

Topics in Deep Learning and Natural Language Processing (MSc).

Scientific Data Management (MSc).

Winter Term 2021/2022

Text Mining for Non-Computer Scientists on the Example of Discourse Analysis (MSc). Data Analysis Project (MSc): Extraction of Structured Information using Weak Supervision.

Data Analysis Project (MSc): Wiener Diarium: Finding Toponyms in Obituaries. Data Analysis Project (MSc): Automatic Identifying Civilians Killed by Police.

Non-Degree Studies

Advanced Language Processing School (ALPS'22)

01/2022

ALPS is co-organized by LIG (Univ. Grenoble Alpes), Naver Labs Europe, and Cohere, and consists of a week-long series of NLP lectures, seminars, student projects, etc. 50 participants were selected on a competitive basis.

Oxford Machine Learning Summer School (OxML'21)

07/2021 - 08/2021

OxML is co-organized by AI for Global Goals, CIFAR and the University of Oxford and includes tracks on representation learning, NLP, statistical ML, and ML in healthcare. 400 participants selected on a competitive basis; 6.5% acceptance rate.

Summer School in Informational Retrieval (RussIR'17)

08/2017

The program covered various topics in information retrieval and cognate disciplines focusing on deep learning applied to texts documents, conversational data, images, and video. 91 students were selected on a competitive basis.

TECHNICAL SKILLS

- Programming Languages: Python (excellent) / C#, R, SQL, Bash (familiar with).
- Toolkits: PyTorch, HuggingFace, TensorFlow, Keras, Conda, Pandas, Matplotlib, SciPy, Spacy, NLTK, Sklearn, OpenCV.
- Others: HTML/XML, UNIX, Jupyter Notebook, Slurm, Git, GitHub, GitHub Actions.

LANGUAGES

English (fluent; IELTS - 7.5), German (fluent; TestDaF - C1), French (conversational), Latin & Ancient Greek (with dictionary), Russian (native).