Sasho Nedelkoski

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Summary

I like building end-to-end and scalable machine learning systems. My experience comes from six years of machine learning research and development, and three years of software engineering.

Education

Berlin, Germany **Technische Universität Berlin** October 2018 – April 2021

- Ph.D. in Computer Science (summa cum laude), supervised by Prof. Dr. Odej Kao
- Thesis title: “Deep Anomaly Detection in Distributed Software Systems”

Berlin, Germany **Technische Universität Berlin** October 2017 – September 2018

- M.Sc. in Computer Science (GPA: 1.0 | scale from 4.0-worst to 1.0-best)
- Thesis title: “Event-generated Time Series Anomaly Detection using Deep Learning”
- Best student awards from VDI & TU Berlin, and best master thesis

Skopje, Macedonia **Ss. Cyril and Methodius University** September 2013 – June 2017

- B.Sc. in Computer Technologies and Engineering (GPA: 9.93 | scale from 5-worst to 10-best)
- Thesis title: Lung Cancer Detection using Deep Learning
- Best student award (2013/2014, 2014/2015, 2015/2016 and 2016/2017 academic year)

Work experience

Chief Technology Officer **logsight.ai** August 2021 – Present

- Developed end-to-end machine learning system incl. data ingestion, processing pipeline, and visualization
- Developed system-agnostic model for anomaly detection in software application logs
- Implemented data differentiation method that is primarily used for software verification

Research associate **Technische Universität Berlin** October 2017 – present

- Research on anomaly detection, distributed systems reliability, and learning from heterogeneous data
- Worked on various ML projects building end-to-end tools funded from Huawei, Berlin Big Data Center (BBDC), and BIFOLD
- Responsible for teaching of seminars and projects

Skills

Programming languages and frameworks

- Python, PyTorch, Python Analytics Stack, MLFlow, Git, Kotlin, Spring Boot, Kafka, ELK, Docker

Languages

- English (full professional proficiency), Macedonian (native), German (A2), Serbo-Croatian (professional proficiency), Spanish (limited working proficiency)

Research Highlights

1. Sasho Nedelkoski, Jasmin Bogatinovski, Alexander Acker, Jorge Cardoso, and Odej Kao. "Self-Attentive Classification-Based Anomaly Detection in Unstructured Logs." In Proceedings of the 20th IEEE International Conference on Data Mining (ICDM2020). 2020.
2. Sasho Nedelkoski, Jasmin Bogatinovski, Alexander Acker, Jorge Cardoso, and Odej Kao. "Self-Supervised Log Parsing." In Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD2020). 2020.
3. Sasho Nedelkoski, Jasmin Bogatinovski, Jorge Cardoso, and Odej Kao. "Self-Supervised Anomaly Detection from Distributed Traces." In Proceedings of the 13th IEEE/ACM International Conference on Utility and Cloud Computing (UCC2020). 2020.
4. Sasho Nedelkoski, Jorge Cardoso, and Odej Kao. "Anomaly Detection and Classification using Distributed Tracing and Deep Learning." In Proceedings of the 19th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID). 2019.
5. Sasho Nedelkoski, Jorge Cardoso, and Odej Kao. "Anomaly Detection from System Tracing Data Using Multimodal Deep Learning." In Proceedings of the 12th IEEE International Conference on Cloud Computing (CLOUD2020). 2019.

Competitions

- Kaggle Quora Question Pairs (May 2017) – *Gold medal, top 0.3%*. Developed complex ensemble of machine learning models (multiple deep learning and tree boosting methods).
- Kaggle Data Science Bowl 2017– Lung Cancer Detection (April 2017) – *Silver medal*, top 4%. Using a data set of thousands of high-resolution lung scans developed ensemble of deep learning models that accurately determine when lesions in the lungs are cancerous.
- Kaggle Bosch Production Line Performance (November 2016) – *Silver medal*, top 3.6%. Solution using ensembles and gradient boosting.
- Kaggle Predicting Red Hat Business Value (September 2016) – *Silver medal*, top 1.6%. Solution using ensembles and gradient boosting.
- Robomac 2016 **–** *1st place*. Robomac is annual international competition held at Faculty of Electrical Engineering and Information Technologies – Skopje and organized in a partnership with IEEE.

Personal links

- Google Scholar: https://scholar.google.de/citations?user=4we2u34AAAAJ
- LinkedIn: https://www.linkedin.com/in/snedelkoski/
- Kaggle: https://kaggle.com/salkaa