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# Sergey Redyuk

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**EDUCATION**     **Technische Universität Berlin**, Berlin, Germany *October 2019 – present*  
*Ph.D. Candidate*, Database Systems and Information Management group (DIMA)  
Helmholtz Einstein International Berlin Research School in Data Science (HEIBRiDS)

Topics: End-to-End Management of Data Science Processes, Research Reproducibility

**University of Skövde**, Skövde, Sweden *September 2016 – June 2018*  
*Master of Science in Informatics with specialization in Data Science* (120 ECTS, GPA: 3.25/4.00)

Thesis: Finding Early Signals of Emerging Trends in Text through  
Topic Modeling and Anomaly Detection

Visby Programme scholarship holder, funded by the Swedish Institute  
Global Swede Award 2018 for excellent social, innovative and entrepreneurial  
performances, issued by the Swedish Ministry of Foreign Affairs

**Moscow Engineering Physics Institute**, Moscow, Russia *September 2012 – July 2016*  
*Bachelor of Information Systems and Technologies* (240 ECTS, GPA 3.74/4.00)

Specialization: Mathematical support, hardware and software for IS

Thesis: Sequential Traversing Method for Generalized Search Trees  
with Concurrent Access for PostgreSQL Database Management System

**TECHNICAL SKILLS**     Programming Languages: Python, Scala, PL/pgSQL, Ruby, Java, C/C++  
Machine Learning Tools: Keras, scikit-learn, Numpy, Pandas [python]  
Big Data Frameworks: Apache Spark  
Database Management Systems: PostgreSQL, MongoDB, Oracle

**RESEARCH EXPERIENCE**     *Research Associate @ TU Berlin* *October 2019 – present*  
· Research reproducibility, end-to-end management of data science processes  
· Data management, experimentation in software engineering

*Research Assistant @ University of Skövde* *August 2017 – May 2018*  
Project: Dataflow – Finding Patterns in New Data Flows,  
funded by the Swedish Governmental Agency for Innovation Systems (VINNOVA)

· Data management, exploratory data analysis, production line simulation  
· Decision support systems to be used in metal industry

Project: DREAM – Development of Robot-enhanced Therapy for Children with Autism  
Spectrum Disorders, funded by the 7th Framework Programme of the EU, grant #611391

· Algorithms for automated annotation generation for video-recorded therapeutic interventions  
· Deep Learning algorithms for facial expression classification

**INDUSTRIAL EXPERIENCE**     *Summer Intern @ SAP Labs LLC, Moscow, Russia* *July 2015 – August 2015*  
· Application design and development within the area of precision agriculture  
· Data retrieval, analysis and visualization using SAP HANA Cloud Platform and SAP Fiori

**SOFT SKILLS**     Adaptable, goal-oriented, focused on professional experience acquisition, strong team-working and  
coordination skills, positive work ethics

RESEARCH INTERESTS End-to-End Management of Data Science Processes, Research Reproducibility, Automation in Data Science, Interpretability in ML, Biologically- and Neuroscience Inspired ML

PUBLICATIONS M. Esmailoghli, **S. Redyuk**, R. Martinez, A. Ziehn, Z. Abedjan, T. Rabl, V. Markl (2019). Explanation of Air Pollution Using External Data Sources. In *Proceedings of the 18th Symposium for “Database Systems for Business, Technology and Web” (BTW’19)*, University of Rostock, Rostock, Germany

**S. Redyuk** (2019). Automated Documentation of End-to-End Experiments in Data Science. In *Ph.D. Symposium track, IEEE 35th International Conference on Data Engineering (ICDE’19)*, Macau, China

**S. Redyuk**, E. Billing (2017). Challenges in face expression recognition from video. In *SweDS 2017: The 5th Swedish Workshop on Data Science. Data Science Division, Department of Computer Science and Engineering, University of Gothenburg, Chalmers*

J. Sun, **S. Redyuk**, E. Billing, D. Högberg, P. Hemeren (2017). Tactile Interaction and Social Touch: Classifying Human Touch Using a Soft Tactile Sensor. In *Proceedings of the 5th International Conference on Human Agent Interaction (HAI ’17)*. ACM, New York, NY, USA, 523-526.  
DOI: <https://doi.org/10.1145/3125739.3132614>

PROJECTS **“Explanation of Air Pollution Using External Data Sources” @ BTW’19**  
*BTW Data Science Challenge, 1st place*

- Data integration and cleaning, exploratory data analysis, looking for causes of air pollution

**“Deep Learning Algorithms for Video Analysis. Human Behavioral Feature Extraction and Classification” @ SweDS’17**

- Deep Learning algorithms (CNN, RNN) for facial expression classification
- Algorithms for automated annotation generation for video-recorded therapeutic interventions

**“Tactile Interaction and Social Touch. Classifying Human Touch using a Soft Tactile Sensor” @ HAI’17**

- Machine [deep] learning algorithms for human touch classification

TEACHING EXPERIENCE *Teaching Assistant @ TU Berlin* *April 2019 – August 2019*  
Course: Advanced Information Management III - Scalable Data Analysis and Data Mining

- Lectures on Dimensionality Reduction, Clustering, Classification

*Teaching Assistant @ University of Skövde* *August 2017 – January 2018*  
Course: Network and System Administration – Sustainable Development IT516G

- Formal assessment of the experimental design and reports on system performance evaluation
- Supervision of students

EXTRA CURRICULAR ACTIVITIES *Chairperson @ NFGL Local Network Skövde* *October 2016 – June 2018*

- Financial management, communication, event management
- Covering topics in interdisciplinary nature of data science and sustainable development

Skövde Network for Future Global Leaders, funded by the Swedish Institute

LANGUAGES **Russian** — Native      **English** — Fluent      **German** — Elementary      **Swedish** — Elementary