# ANDREI RYKOV

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## OBJECTIVE

I'm a Data Science and AI graduate with research experience, seeking a full-time research-oriented position or PhD in machine learning. My research interests are cluster analysis, representation learning, and deep learning in general.

## EXPERIENCE

**Data Science Engineer** November 2023 - now
BAUM [Website] *Moscow, RU*

- Implemented essential data analysis and machine learning algorithms for the no-code platform Razum AI using Python, PySpark and Tensorflow.
- Lead the data science development team for the educational version of the platform - Razum AI EDU, projecting the architecture for the data analysis tools.
- Provided consultation for several cases of platform integration combined with a solution for consumers's data analysis tasks (text summarization and predictive analytics).

## SKILLS

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|---|---|
| **Data Analysis & Big Data Management** | NumPy, SciPy, Pandas, PySpark |
| **Data Visualization & Interpretation** | Matplotlib, Seaborn, Plotly, Dash, Shapley |
| **Machine Learning and Data Mining** | Sci-Kit Learn, natasha, nltk, SparkNLP |
| **Deep Learning** | PyTorch, TensorFlow |
| **Data Management** | SQL, Neo4j, MongoDB |
| **Programming Languages** | Python, R |
| **Techniques** | Cluster Analysis, Predictive Analytics, Data Modeling |
| **Project Management** | RedMine, GitLab, Flowchart & Schematic projecting |
| **Languages** | English (Advanced), German (Beginner), Russian (Native) |

## EDUCATION

**Master of Science** in Data Science and AI, Eindhoven University of Technology (TU/e) 2021-2023
Graduation Thesis: Robust Deep Spectral Clustering
(Supervisor: dr. Sibylle Hess, Grade: 8/10)

**Bachelor** in Business Informatics, Higher School Of Economics, Moscow 2017 - 2021
Graduation Thesis: Application of Anomalous Clustering Methods for Determination of the Number of Clusters
(Supervisor: prof. Boris Mirkin, Grade: 9/10)

## PUBLICATIONS & PROJECTS

**Publication** Rykov, A., De Amorim, R. C., Makarenkov, V., & Mirkin, B. (2024). Inertia-based indices to determine the number of clusters in K-means: an experimental evaluation. IEEE Access. [Link]

**Conference** Rykov, A., Hess, S. (2023). Robust Deep Spectral Clustering. BNAIC BeNeLearn 2023, Type D: Student Thesis Abstracts [Link]

**MirCl** A small Python package was developed on top of the code for the bachelor thesis and further research related to clustering and the optimal choice of clusters. The package is planned to be edited to make the process of clustering easier and more informative. [GitHub]