Alexandr Koryachko

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SKILLS

PROGRAMMING

Languages:

Python • PySpark • SQL • Matlab Packages:

Pandas • Polars • Scikit-learn • PyTorch numpy • NLTK • spaCy • mllib • Keras Tools:

Git • Databricks • AWS • ATEX

DATA SCIENCE

Big Data • Statistics • Machine Learning Data Visualization • Experiment Design

LINKS

LinkedIn:// akoryachko
Github:// akoryachko
GoogleScholar:// bISiDH4AAAAJ

EDUCATION

NORTH CAROLINA STATE UNIVERSITY

PHD IN ELECTRICAL ENGINEERING Aug 2018 | Raleigh, NC Minor in Mathematics GPA: 4.0 / 4.0

NATIONAL RESEARCH UNIVERSITY OF ELECTRONIC TECHNOLOGY

MS IN COMPUTER SCIENCE

Jul 2009 | Moscow, Russia Conc. in Software Engineering GPA: 4.0 / 4.0

BS IN COMPUTER SCIENCE

Jun 2007 | Moscow, Russia Conc. in Information Security GPA: 3.92 / 4.0

COURSEWORK

Pattern Recognition **Detection and Estimation** Neural Networks Mathematical Modeling Uncertainty Quantification Applied Bayesian Analysis Random Processes Graphs and Graphical Models Computer Vision Information Theory Digital Signal Processing Nonlinear Programming Multivariable Control Systems Numerical Analysis Modeling of Biological Systems **Technical Communications**

EXPERIENCE

XOMNIA | SENIOR DATA SCIENTIST

Feb 2025 - Present | Amsterdam, Netherlands

Consulting at Rabobank:

- Proposed and prototyped a model for predicting the next transaction date in periodic sequences.
- Standardized coding practices across team repositories, improving readability and reducing time spent on stylistic debates during PR reviews.
- Designed a monitoring framework that transformed a collection of notebook-based scripts—previously reprocessing full datasets each run—into modular, object-oriented components that process only new data increments as they arrive.
- Organized knowledge-sharing sessions to equip fellow data scientists and engineers to use the developed tools effectively and independently.

Internal projects:

Career mentor

XOMNIA | DATA SCIENTIST

Apr 2023 - Feb 2025 | Amsterdam, Netherlands

Consulting at Rabobank:

- Initiated and took a leading role in the periodicity cold start project. The project aimed to predict periodicity starting with the first transaction.
- Implemented a statistical test in PySpark on Databricks to ensure performance stability of the transaction periodicity detection model.

Internal projects:

- Authored a **blog post on data visualization** that ranked among the company's top 5 most-viewed articles for three consecutive months.
- Delivered a training session on PySpark best practices in Databricks.

VERICAST | STAFF DATA SCIENTIST I

Feb 2022 – Sep 2022 | Morrisville, NC, USA

Developed automated feature engineering functionality for big data applications within a scalable machine learning execution engine on AWS. The accompanying Python library was projected to save data scientists up to 90% of the time otherwise spent writing custom SQL queries for each new client dataset.

VERICAST | DATA SCIENTIST II

Mar 2021 - Feb 2022 | Morrisville, NC, USA

Prototyped tools for a privacy centered digital ad targeting solution that relies on webpage content as opposed to user tracking for placing clients' ads:

- Trained an embedding model for 3,000 interest categories based on 200 million classified web URLs with PySpark Machine Learning library. The model suggests the most similar categories to clients' keywords. The implementation reduced ad campaign setup time and increased the number of relevant categories to target.
- Built a classification model for identifying web pages with brand sensitive content. The model reduced ad serving on websites with unsafe content by 80% and improved clients' satisfaction with reporting.
- Built machine learning pipelines that analyze 300 million crawled web pages to select digital ad placements that are the most relevant to clients' desired content from 10 billion options daily.

VERICAST | DATA SCIENTIST I

Dec 2018 - Mar 2021 | Morrisville, NC, USA

Designed Machine Learning algorithms for Big Data processing

- Engineered tools for identifying store competitors from tens of millions of possible options by matching descriptions with spaCy Python library.
- Designed and tuned a random forest model for inventory quality prediction for digital ad auctions using Scikit-Learn.