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 • LaTeX

DATA SCIENCE

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

LINKS

LinkedIn:// **akoryachko**
Github:// **akoryachko**
GoogleScholar:// **blSiDH4AAAAJ**

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.