

Keywords

python, optimization, machine learning, data science, statistics, numpy, pandas, PostgreSQL, ClickHouse, scipy, transformers, pytorch, C++, Rust, NLP, Docker.

Experience

- 2021 Apr – **Data Science intern, Lead by lead DS @ Hypr, Saint-Petersburg**
- 2021 Jun Solved case of automatic categorization of users posts in social network. Scraped, labeled the data. Used NLP for CV domain.
- 2022 Sep – **Game developer @ Hive, Perm, Russia**
- 2023 Mar Applying genetic and differential evolution algorithms to build an efficient matchmaker for multiplayer in online mobile games; making visualizations via egui and macroquad; building data collection pipelines; rust language. Making player and debug cameras; building raycasting.
- 2023 Oct – **AI Engineer @ Exponenta, Moscow, Russia**
Working with repricer on marketplaces. Implementing optimal prices models using contextual multi-armed bandits (CMAB). Implementing models of competitors using boostings and neural networks (CLIP, siamese, XGB). Creating framework for data labelling using python-telegram-bot (PTB). Creating models of trend, seasonality, demand using time-series models (Prophet, XGB, xARIMAX, linear) and neural networks (BiLSTM, Transformers). Applying to production with customer. Lifting using Docker+Flask for MVP's

Education

University

- 2017 – 2018 **Cybersecurity department, Bachelor, Tver State University, Russia**
- Sep 2018 – **Applied mathematics and computer science, Bachelor, Saint-Petersburg State University, Russia**
- Sep 2023 – **Data Analytics, Master, Saint-Petersburg National Research University of Information Technologies, Mechanics and Optics, Russia**

MOOCs, CSC, YSDA

- Apr 2018 - **Algorithms: theory and practice. Methods.,**
- Jun 2018 <https://stepik.org/course/217>
- Sep 2018 - **Basics of programming and vectorization with R,**
- Nov 2018 <https://stepik.org/course/497>
- Sep 2019 - **Elements of financial mathematics,**
- Jan 2020 <https://intuit.ru/verifydiplomas/101301190>
- Jun 2020 - **Machine Learning Course,**
- Jun 2021 <https://mlcourse.ai>
- Feb 2022 – **Mathematical statistics @ CSC**
- May 2022
- Sep 2022 **NLP course @ YSDA**
- Sep 2022 **Deep CV & Graphics course @ YSDA**

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Projects

Study projects/pet projects

Mindmaps for everything <https://github.com/breadfan/mindmaps-for-everything>

Smart diagrams for math-related objects

Created mindmaps for better understanding ("Zettelkasten" inspiration) and keeping in mind tech-related objects. There are statistics, NLP, optimization and deep learning using pytorch now. Maps are available in **rus** and **eng** languages.

Lyric music recommender <https://github.com/breadfan/lyrics-based-songs-recommender>

Using doc2vec and BERT embeddings for recommendation based on songs lyrics.

Created models with doc2vec and DistilBERT, created UMAP reduced embeddings for 2-d and 3-d visualisations (Plotly). Generated bot using «telegram» library.

Automatic posts categorization <https://github.com/breadfan/Bachelor-Thesis>

Applying BERT for automatic posts categorization in social network.

Using BERT, BERTopic and word2vec + TF-IDF for labeled images/video categorization.

Upgraded quality of models from BERT to word2vec.

Having categories need to make mapping from labels amount of posts to that categories for making simple recommendations.

Accelerated MDM-method https://github.com/breadfan/Accelerated_MDM_method

Researching acceleration of an MDM-method

As a course work for third year two methods were implemented: MDM and accelerated MDM methods with visualization for 2- and 3-dim. Cases for running time comparison.

Technical Skills

Languages Python, Rust, plpgsql, C/C++

VCS Git

OS Windows, Linux (Ubuntu)

On the Internet

GitHub <https://github.com/breadfan>

StackOverflow <https://stackoverflow.com/users/9850300/taciturno>

LinkedIn <https://www.linkedin.com/in/rocauc>

LeetCode <https://leetcode.com/breadfan/>

Telegram <https://t.me/rocauc>