# Sanjar Adilov | Curriculum Vitae

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ML Software Engineer w/ 7 years of experience, BSc in Applied Math and Computer Science. Broadly interested in machine learning, esp. efficient and reliable deep learning for natural language processing. Working on full-stack research and development of conversational AI experiences. Also have research experience in machine learning for computational chemistry, such as molecular representation learning.

## Employment

**Data Scientist** **Aug 2022 – Present**
*Alif Tech* *Tashkent, Uzbekistan*

- End-to-end development of task-oriented, closed-domain AI assistants for automation of customer experiences. Responsibilities include data curation, modeling, evaluation, operationalization, and maintenance. Some of the specific concepts are parameter-efficient fine-tuning, contrastive learning, named-entity recognition, and resource-efficient & scalable deployment of DL pipelines. The major results are $68$-$72\%$ of *containment rate* w/ $\gtrapprox 97\%$ *coverage* of chats through all contact channels in $\leq 2$ seconds of *response time* and estimated $\lessapprox 90\%$ of *end-to-end accuracy*, incl. $48$-$65\%$ of *task success* 😀. Whew!
- Little bit of backend and/or modeling for document OCR, credit scoring, transaction fraud monitoring, and domain-specific topic modeling.

**Research Engineer II** **Jan 2021 – Aug 2022**
*Romanovsky Institute of Mathematics, Academy of Sciences of Uzbekistan* *Tashkent, Uzbekistan*

Adapting deep learning for drug design by building a unified framework for downstream generative and supervised molecular tasks via large-scale causal transformers (see, e.g., `smiles-gpt`).

**Research Assistant** **Jan 2019 – Dec 2020**
*Romanovsky Institute of Mathematics, Academy of Sciences of Uzbekistan* *Tashkent, Uzbekistan*

- Single-/multi-output classification of high-dimensional molecular data (see, e.g., `sparse-cheml`).
- Improvement of SOTA generative molecular models (see, e.g., `moleculegen`).
- Survival analysis of patients with COVID-19 in Uzbekistan.

**Research Engineer I** **Sep 2018 – Dec 2018**
*Romanovsky Institute of Mathematics, Academy of Sciences of Uzbekistan* *Tashkent, Uzbekistan*

ML for low-data QSPR/QSAR modeling using graph neural networks (see, e.g., `nitrocom-learning`).

**Intern** **Jun 2017 – Aug 2018**
*Misc.* *Tashkent, Uzbekistan*

Several internships. Mostly bash scripting and basic frontend & backend development w/ Python and JavaScript.

## Skills

- **Programming Languages**: Python 🐍, Bash, SQL, LaTeX, C, R.
- **Tools**: *[DS]* PyTorch, Lightning 🗲, Tensorflow, Jax & co., 🤗 Transformers & co., Keras, Scikit-Learn & co., XGBoost & friends 🎗, Pandas, etc.; *[MLE]* DVC, MLFlow, Haystack; *[SE]* Git, Sanic, FastAPI, AIOHTTP, Pytest, Docker, K8S.
- **Concepts & Practices**: Scientific Research, CI/CD, Scrum, OSSD, MLOps.

## Education

**BSc in Applied Mathematics and Computer Science** **Sep 2014 – Jun 2018**
*Lomonosov Moscow State University in Tashkent* *Tashkent, Uzbekistan*

- Main coursework includes pure & applied math, intelligent systems, and scientific computing in C/C++.
- Research and thesis on graph theory (coloring and planarity testing).
- Volunteer instructor at Math and Programming Club for prospective students.
- ACM-ICPC NEERC contestant.

## Misc.

- **Publications**: `https://scholar.google.com/citations?user=NzU11nAAAAAJ`
- **Languages**: Uzbek (native), Russian (full proficiency), English (TOEFL 108/120, 2024).
- **Community Service**: Mentoring in hackathons (one has eventually become an integral part of our credit scoring ecosystem); public presentations on DL life cycle, foundational models, tabular learning, etc.
- **Side Projects**: `scikit-fallback`: machine learning w/ rejections (more on Medium and Github).
- **Github Profile**: `http://github.com/sanjaradylov`
- **Kaggle**: `http://kaggle.com/sshadylov`
- **Medium**: `https://medium.com/@sshadylov`
- **StackExchange**: `https://stackexchange.com/users/9338787/sanjar-adylov`
- **Hobbies**: Guitars, US & Soviet history, classic rock music, fiction books, old movies, swimming.