

Valentin Aliferov

Junior Data Scientist

Experience

Freelance, Software Developer Oct 2017 - Ongoing

Key Skills: Python, C, SQL, Linux, Git, REST API, Telegram bots

SkySoft, Software Engineer Jul 2011 - Oct 2017

Development and maintenance of automated control systems in the construction industry. Implemented an automated control and accounting system for a batching plant (production of reinforced concrete products).

Stack: Linux, C, SQLite, MySQL, JavaScript, Websockets

SocBank, Network Systems Administrator Jul 2010 - July 2011

PBX, CCTV Systems, Banking Equipment Maintenance

Windows Server, Active Directory, Network Administration

Remote Banking Customer Support, Desktop Technical Support

ArendaClub, Network Systems Administrator Sep 2009 - Jul 2010

Computer Systems & Network Administration, Desktop Technical Support

Linux, Xen Hypervisor, Samba, MySQL, Bash / Python Scripting

Windows Server, Active Directory, MSSQL Administration

Projects

🔗 **Neural Machine Translation** Mar 2022

Implemented a transformer model for Neural Machine Translation from Russian to English and deployed it as a telegram bot on Oracle Cloud. Implemented the method of Voita et al. of pruning redundant attention heads.

🔗 **Colorizing and Restoring Old Images** Jan 2022

Implemented a tool for restoring old images and deployed it as a telegram bot on Oracle Cloud. Based on the DeOldify project.

🔗 **One Shot Face Stylization** Jan 2022

Implemented a tool for face stylization and deployed it as a telegram bot on Oracle Cloud. Based on the JoJoGAN project.

🔗 **A Game Based on Reversing Audio** Jan 2022

This is an implementation of a game called "SSA". The idea is simple - you're singing a song, it's being recorded, then reversed and cut in pieces. Someone from the opposite team then listens to it and tries to imitate the same with their own voice. Finally, it's reversed again, and the task is to guess what song it was.

🔗 **Searching for Similar Voices** Dec 2021

Implemented a tool that allows you to record a short voice message and find the most similar voices (among celebrities - dataset voxceleb) to yours. It's based on the embeddings extracted from short audio clips (celebrity interviews on youtube) using the "spkrec-ecapa-voxceleb" model from speechbrain toolkit.

🔗 **Music Source Separation** Dec 2021

Implemented a tool that allows you to extract the "sources" (bass, drums, vocals and other) from a given piece of music. Deployed it as a telegram bot on Oracle Cloud. The model is based on the Demucs architecture.

🔗 **Object Detection** (computer vision) July 2021

Implemented a tool for detecting objects on a given image and then deployed it as a telegram bot on Oracle Cloud. It's based on the YOLO5 architecture (YOLOv5s, pretrained on MSCOCO).

🔗 **Image Classification** (Journey to Springfield Competition) July 2021

Built a model for image classification and then deployed it as a telegram bot on Oracle Cloud. It's based on the EfficientNet architecture (EfficientNet-B0, pretrained on ImageNet).

Contacts

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Skills

Python, C, Bash, SQL, Javascript

PyTorch, NumPy, Pandas, ONNX Runtime

Scikit-Learn, Matplotlib, Plotly

Linux, Git, Docker, SQLite, MySQL

REST API, Websockets

Telegram bots

Education

Voronezh State Technical University

Information Technology in Education 2008 - 2012

Computing Machines and Networks 2004 - 2008

Additional Education

Deep Learning School (MIPT) 2020 - 2022

🔗 Deep learning architectures for Computer Vision, Natural Language Processing, and Audio

Hackathons & Challenges

🔗 Commercial Real Estate Sep 2021

🔗 Music Demixing Challenge July 2021

🔗 Prediction of Sickness Absence May 2021

Contributions

🔗 YOLOv5 (object detection) July 2021

Fixed a bug (wrong orientation of an input image after loading it - the EXIF info wasn't taken into account)

Certificates

🔗 Applied ML in Python Coursera Feb 2021

🔗 EF Standard English Test EFSET Jan 2021

🔗 Statistics with Python Coursera Dec 2020

🔗 Python 3 Programming Coursera Dec 2020

Languages

Russian (Native), English (B2)