Kirill Ryzhikov

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Education

Moscow State University Moscow, Russia

Bachelor of Computational Mathematics and Cybernetics, department of Mathematical Statistics Aug. 2019 – July 2023

Experience

Research and Development engineer March 2021 – Present

Tinkoff, AI Technology Center *Moscow, RU*

- Creating platform for talking heads and deep-fake generation for commercial use cases
- Implemented real-time video from speech generation algorithm for 2d photo-realistic and 3d generation
- Using PyTorch, CUDA, Docker, Reddis, FastAPI

Junior ML Researcher March 2020 – March2021

Fintech Lab at MIPT associated with Tinkoff *Moscow, RU*

- Performed research on talking heads generation for Russian speaker
- Created Russian audio-visual dataset from different sources, using specially created pipeline
- Developed MVP demo of talking heads generation from speech.
- Wrote the publication for AI conference
- Used PyTorch, Docker

ML/DL mentor Dec 2020 – Present

Tinkoff.Generation *Moscow, RU*

- Conducting lectures about DL basics in Computer Vision, Media generation
- Checking homeworks, preparing quizes

Publications

63 All Russian science conference at MIPT Moscow, RU, 2020

Building facial expressions of a person from the recording of his speech *Diploma for best presentation in AI section*

- Created architecture for facial key points sequence generation from speech
- Researched application of Harmonic Convolutions in Speech Embedding task
- Researched application of AutoVC like architectures for speech splitting to style and content
- Used PyTorch, Docker

Projects

PaletteAPI | *Python, FastAPI, OpenCV* | GitHub Dec 2020

- Developed API for major colours palette extraction from image
- Implemented image quantization algorithms for real-time inference

PixIt | *Python, TeleBot, OpenCV, Sklearn* | GitHub Mar 2021

- Developed API for image pixelisation using major colours.
- Implemented telegram bot for testing and customer development

Technical Skills

Languages: Python, C(C99), C++17
DBMS: MongoDB
Frameworks: PyTorch, Tensorflow, FastAPI, Flask, Telebot
Developer Tools: Git, Docker,Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Vim, bash
Libraries: pandas, NumPy, Matplotlib, Pytorch-Lightning

Other experiens

CROC-It-solution school | *Android, Java, Firebase* | 2018

- 1-st place at social apps sections

Sber.Hack | *Andriod, Java, Python, Numpy*| 2018

- 2-nd place overall with project for detecting epilepsy attack Epi.Detect

Acadoton | *Andriod, Java, Python, Numpy, OpenCV, Arduino*| 2018

- 4-nd place overall with project of smart lock for easy flat sharing or rent

Hack.Moscow | *Andriod, Java, Python, Numpy*| 2018

- 2nd place in Healthcare track with Stroke.Detect app for strokes detection