# Kirill Ryzhikov

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## Education

**Moscow State University** — Moscow, Russia
*Bachelor of Computational Mathematics and Cybernetics* — *Aug. 2019 – July 2023*

## Experience

**Machine Learning Research Junior** — March 2020 – Present
*Fintech Lab at MIPT associated with Tinkoff* — *Moscow, RU*

- Developed the end-2-end system for talking heads generation from speech and photo
- Developed the telegram bot for testing TalkingHeads generation system
- Created pipeline for parsing youtube to create Russian Audio-Visual speech dataset

**Machine Learning / Deep Learning mentor** — Dec 2020 – Present
*Tinkoff.Generation* — *Moscow, RU*

- Reading lectures at Deep Learning course
- Created seminar notebooks for Machine Learning/Deep Learning courses
- Held ML/DL online seminars

## Publications

**63 All Russian science conference at MIPT** — Moscow, RU, 2020
*Building facial expressions of a talking person from an audio recording of his speechDiploma 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

**Habr** — Moscow, RU, 2020
*Developing a visual assistant* — *Link*

- Created demo of end2end system for voice assistant visualization

## Projects

**PaletteAPI** | *Python, FastAPI, OpenCV* | GitHub — Dec 2020 – Present

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

**POArt** | *Python, OpenCV, Numpy*| GitHub — Dec 2020 – Present

- Developed python app to apply Artistic effect to portrait image by mixing some famous piece-of-art and original image according to facial landmarks.

## Hackathones

**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

## Technical Skills

**Languages**: Python, C/C++
**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