

# **Alexander Smirnov**

Amay 21, 1999

Russia, Saint Petersburg

SmirnovAlexander

ru.alexander.smirnov@gmail.com

@furiousteabag

+79119727982

# Languages

Russian

**English** 



# **Working Experience**

08.2020 now 7 months

Recommender systems engineer

IT Service, startup Researching different approaches for building news & videos recommender systems and deploying them to production.

These modules were researched, written, deployed and unioned into hybrid recommender:

- · Collaborative filtering
- · Content-based filtering
- · Session filtering
- · Popularity filtering

Microservice architecture was used.

matrix factorization python recommender systems high load clickhouse S3 microservices redis mySQL

mongoDB flask docker gitlab CI k8s

# **Internships**

09.2019 -Machine learning intern 12.2019

Predicting core properties (type, carbonate, ruin, saturation) using

4 months core samples images.

Deep learning was used to detect properties; zones were highlighted

using segmentaion.

python CV

Machine learning intern 07.2019 -

08.2019 Collecting data and train algorithm to find pictures that contain cir-

cles and arrows on them. 2 months

python CV C#

### Education

#### Study

2017 - now **Bachelor Studies** 

Saint Petersburg State University

Belkasoft

Software and Administration of Information Systems, Department

of Information and Analytical Systems.

**Bachelor's Thesis** Department of Information and Analytical Systems A hybrid approach for news recommender system using optimiza-

tion methods.

**Coursework Thesis** Department of Information and Analytical Systems

Automatic core samples classification.

2014 – 2017 **Secondary education** 

Physics and Mathematics Lyceum No. 239

# **Alexander Smirnov**

# Skills -

Linux

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- arch, i3
- vim, zsh

Python

- $\bullet$   $\bullet$   $\bullet$
- numpy, scipy, matplotlib
- scikit-learn, tensorflow
- surprise
- flask
- jupyter notebook
- Recommender systemscollaborative filtering
  - content-based filtering
  - session filtering

  - cold start
  - matrix factorization
- Machine learning
  - supervised learning
  - clustering
  - dimensionality reduction
  - data visualization
  - EDA
- Development



- gitlab, CI / CD
- k8s
- microservices



- MySQL
- MongoDB
- ClickHouse
- Redis
- Amazon S3
- Oracle

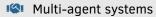
Web development



- ▶ HTML, CSS, JS
- JQ, AJAX, bootstrap

.NET

- C#
- ▶ F#







- android development
- C C++

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## **Education**

#### Online courses

2020 – now	Introduction to Recommender Systems Non-Personalized and Content-Based recomm	University of Minnesota nenders.
2020 – now	<b>Algorithms. Theory and practice. Methods</b> Algorithms introduction.	Computer Science Center
2020 – now	Programming in C++ Main concepts of C++.	Computer Science Center
2020 – now	<b>Training on labeled data</b> Supervised learning models: linear models, composition.	MIPT lecision trees, models
2020	<b>Linux Fundamentals</b> Introduction to using Linux from the comman	Paul Cobbaut d line.
2020	Web development for beginners Basics of web development.	ITC
2019	Mathematics and python for data analysis Refresh mathematics knowledge applied in da python libraries that are related.	MIPT ta analysis and review
2019	Introduction to TensorFlow Examples of how to work with TensorFlow libr	deeplearning.ai rary.

#### Offline courses

2016	Student STAR Program-Russia CoE track	
	Project management course.	
2015 – 2016	Samsung IT School	Samsung
	Android development course.	

#### **Books**

2021	The Lean Startup: How Today's Entrepreneurs Use	Eric Ries
	Continuous Innovation to Create Radically Successful	
	Businesses	

# Alexander Smirnov Projects

2020	Git server
	My own private git server hosted on raspberry pi.
2020	Tetris
	Terminal tetris game for *nix operating system.
2019	Emoji communicator
	Visualizing text with emoji letters.
2019	Siamese Neural Networks
	Implementation of siamese network for one-shot learning task.
2019	Classifying browser extension
	Browser extension that allows you to classify site if it is suitable for children to watch.
2018 – 2019	Android meme application
	An android app that show memes depending on your preferences.
2018 – 2019	<b>Custom file manager</b> It illustrates a bunch of programming patterns and optimization techniques.

# **Achievements**

2019	2nd place	PhotoLab PhotoHack
2018	Finals	VK Hackathon

# **Hackathons**

2020	TrudHack 2 CV parser	Saint Petersburg
2019	<b>Tender Hack.Spb</b> Search algorithm	Saint Petersburg
2019	PhotoLab PhotoHack Program that help users to express themselves in ch	Veliky Novgorod nats
2019	<b>QuantNet</b> Trading algorithm	Saint Petersburg
2019	SPbU GameJam 2019 Game	Saint Petersburg
2018	VK Hackathon Entertaining app	Saint Petersburg