








# Alexander Smirnov

 May 21, 1999  
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## 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.

python   recommender systems   matrix factorization  
microservices   high load   clickhouse   redis   S3   MySQL  
mongoDB   flask   docker   gitlab CI   k8s

## Internships

09.2019 –  
12.2019  
4 months

### Machine learning intern

JetBrains

Predicting core properties (type, carbonate, ruin, saturation) using core samples images. Deep learning was used to detect properties; zones were highlighted using segmentation.

python   CV

07.2019 –  
08.2019  
2 months

### Machine learning intern

Belkasoft

Collecting data and train algorithm to find pictures that contain circles and arrows on them.

python   CV   C#

## Education

### Study

2017 – now

### Bachelor Studies

Saint Petersburg State University

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 optimization methods.

### Coursework Thesis

Department of Information and Analytical Systems

Automatic core samples classification.












2014 – 2017

### Secondary education

Physics and Mathematics Lyceum No. 239

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## Skills

	Linux	<div><div></div><div></div><div></div><div></div></div>
	▸ arch, i3	
	▸ vim, zsh	
	Python	<div><div></div><div></div><div></div><div></div></div>
	▸ numpy, scipy, matplotlib	
	▸ scikit-learn, tensorflow	
	▸ surprise	
	▸ flask	
	▸ jupyter notebook	
	Recommender systems	<div><div></div><div></div><div></div><div></div></div>
	▸ collaborative filtering	
	▸ content-based filtering	
	▸ session filtering	
	▸ cold start	
	▸ matrix factorization	
	Machine learning	<div><div></div><div></div><div></div><div></div></div>
	▸ supervised learning	
	▸ clustering	
	▸ dimensionality reduction	
	▸ data visualization	
	▸ EDA	
	Development	<div><div></div><div></div><div></div><div></div></div>
	▸ gitlab, CI / CD	
	▸ k8s	
	▸ microservices	
	DBMS	<div><div></div><div></div><div></div><div></div></div>
	▸ MySQL	
	▸ MongoDB	
	▸ ClickHouse	
	▸ Redis	
	▸ Amazon S3	
	▸ Oracle	
	Web development	<div><div></div><div></div><div></div><div></div></div>
	▸ HTML, CSS, JS	
	▸ JQ, AJAX, bootstrap	
	.NET	<div><div></div><div></div><div></div><div></div></div>
	▸ C#	
	▸ F#	
	Multi-agent systems	<div><div></div><div></div><div></div><div></div></div>
	Java	<div><div></div><div></div><div></div><div></div></div>
	▸ android development	
	C++	<div><div></div><div></div><div></div><div></div></div>

## Education

### Online courses

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

### Offline courses

2016	<b>Student STAR Program-Russia CoE track</b>	EMC
	Project management course.	
2015 – 2016	<b>Samsung IT School</b>	Samsung
	Android development course.	

### Books

2021	<b>The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses</b>	Eric Ries
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## Projects

2020	<b>Git server</b> My own private git server hosted on raspberry pi.
2020	<b>Tetris</b> Terminal tetris game for *nix operating system.
2019	<b>Emoji communicator</b> Visualizing text with emoji letters.
2019	<b>Siamese Neural Networks</b> Implementation of siamese network for one-shot learning task.
2019	<b>Classifying browser extension</b> Browser extension that allows you to classify site if it is suitable for children to watch.
2018 – 2019	<b>Android meme application</b> 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	<b>2nd place</b>	PhotoLab PhotoHack
2018	<b>Finals</b>	VK Hackathon

## Hackathons

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