

# Korolev Daniil

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[github.com/Danielto1404](https://github.com/Danielto1404)

## TECHNICAL SKILLS

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Programming Languages:

- Advanced in **Java, Swift, Python, Haskell**

Familiar with **C++, Obj-c, Kotlin**

Frameworks:

- **Python: numpy, pandas, sklearn, pytorch, implicit, catboost, word2vec, bert**

Working experience: **git, google colab**

## EDUCATION

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### ITMO University, St. Petersburg

Bachelor's in applied mathematics and Informatics

2018—2022

Relevant Coursework: NLP, ML, Recommender Systems, RL, *Algorithms and Data Structures, Computer Architecture, Discrete Mathematics, Programming Paradigms, iOS VK course, C++ course, Java course, Maths logic, Operating systems, Haskell course, CTF Reverse course, Translation methods course*

### Presidential Physics and Mathematics Lyceum №239, St. Petersburg

## WORK EXPERIENCE

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### Sixhands.co

August 2020—October 2020

#### *iOS Junior developer*

Mobile iOS application development for renting premises: Localchair

- Using Alamofire
- REST API
- Using MVP pattern with router

### OK.ru

October 2020 — January 2021

#### *iOS Junior developer*

Upgrading mobile application for OK.ru social network. Implementing ad in feed, fix bugs.

- OK iOS SDK
- Instagram IGListKit framework
- Auto Layout
- Parser generator techniques

## ML Projects

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### Deep-Q-Learning [Python] [source code](#)

- Implementations of Deep Q-learning algorithm for different gym environments
- Support Atari games with env preprocessing

### Matrix Factorization algorithms for collaborative filtering [Python] [source code](#)

- Implementation of most common matrix factorization algorithms: *BPR*, *ALS*, *SVD*, *WARP*
- Tested on [movielens dataset](#)

### Self-written Neural Network library [Python] [source code](#)

- Provides interface for linear layers
- Implemented different optimizers (*Adam*, *RMSProp*, *AdaGrad*, *Momentum*)
- Implemented different loss functions (*MSE*, *Cross Entropy*)
- Implemented init-schemes for weights

### Music-WSDM competition on Kaggle.com [Python] [source code](#)

- Used techniques: NLP (*word2vec*), Gradient Boosting (*CatBoost*)

**ML algorithm developing library:** <https://github.com/Danielto1404/ML-ALGO>

**University projects:** [github.com/Danielto1404/Univeristy](https://github.com/Danielto1404/Univeristy)