## Korolev Daniil

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# github.com/Danielto1404

#### **TECHNICAL SKILLS**

Programming Languages:

 Advanced in Java, Swift, Python, Haskell Familiar with C++, Obj-c, Kotlin Frameworks:

• Python: numpy, pandas, sklearn, pytorch, implicit, catboost, word2vec.

Working experience: git, google colab

#### **EDUCATION**

#### ITMO University, St. Petersburg

Bachelor's in applied mathematics and Informatics

2018-2022

Relevant Coursework: 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**

#### 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

## **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: <a href="https://github.com/Danielto1404/ML-ALGO">https://github.com/Danielto1404/ML-ALGO</a>

**University projects:** <u>github.com/Danielto1404/Univeristy</u>