Korolev Daniil

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[github.com/Danielto1404](https://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, bert**

Working experience: **git, google colab**

**EDUCATION**

**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**

[**Sixhands.co**](https://www.sixhands.co/)

*August 2020**—October 2020*

***iOS Junior developer***

Mobile iOS application development for renting premises: [Localchair](https://apps.apple.com/ru/app/localchair-%D0%B0%D1%80%D0%B5%D0%BD%D0%B4%D0%B0-%D1%80%D0%B0%D0%B1%D0%BE%D1%87%D0%B8%D1%85-%D0%BC%D0%B5%D1%81%D1%82/id1514511527)

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

[**OK.ru**](https://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**

**Deep-Q-Learning [Python]** [source code](https://github.com/Danielto1404/UTXOSet)

* 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](https://github.com/Danielto1404/ML-ALGO/tree/main/recsys/mf)

* Implementation of most common matrix factorization algorithms: *BPR, ALS, SVD, WARP*
* Tested on [movielens dataset](https://grouplens.org/datasets/movielens/)

**Self-written Neural Network library [Python]** [source code](https://github.com/Danielto1404/ML-ALGO/tree/main/networks)

* 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](https://github.com/Danielto1404/Music-WSDM)

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

**ML algorithm developing library:** [*https://github.com/Danielto1404/ML-ALGO*](https://github.com/Danielto1404/ML-ALGO)

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