# DORUK KILITCIOGLU

doruk.kilitcioglu@nyu.edu · (347) 268-1540 · New York, NY 10001
dorukkilitcioglu.github.io · linkedin.com/in/dorukkilitcioglu/

## EDUCATION

**New York University,** Courant Institute of Mathematical Sciences, NY, US — **May 2019**
MSc. Computer Science, **GPA: 4.00**

**Bogazici University,** Turkey — **Jan 2017**
B.Sc. Computer Engineering, Minor: Economics, GPA: 3.47 ($7^{th}$ in class)
Government Scholarship, Dean's Honor List, Student TA

**University of Queensland,** Australia — **Nov 2014**
Exchange Student, GPA: 3.71

## TECHNICAL SKILLS

**ML Domains:** Recommender Systems, Natural Language Processing, Bioinformatics, Finance

**Statistical Analysis:** Bayesian Stats, Time Series, Monte Carlo Estimation, Hypothesis Testing, Visualization

**Machine Learning:** Deep Learning, Topic Models, Clustering, Regularization

**Languages:** Python, Java, Javascript, MATLAB, R, C++, Scheme, Prolog, Perl

**Libraries:** Tensorflow, Scikit-learn, Numpy, Pandas, Matplotlib, NLTK, Lucene, Hadoop, Spring

**Databases:** SQL, Oracle *(PLSQL)*, MongoDB

## WORK EXPERIENCE

*Machine Learning Engineer Intern*, **Hifi,** NY, US — **Jul 2018 – Present**
- Research and implement *(Numpy, Tensorflow)* state of the art algorithms for music recommendation.
- Improved playlist build times by 35% by integrating and testing better nearest neighbor algorithms.

*Student Developer*, **NYU IT,** NY, US — **Oct 2017 – May 2018**
- Applied Machine Learning methods *(scikit-learn, Tensorflow)* to improve the handling of work orders.
- Started out writing *(C#, .NET)* web API for NYU web services.

*Software Dev. Intern*, **Huawei Technologies,** Turkey — **Jun 2015 – Jul 2015**
- Helped develop a Twitter spam detector for telecommunication related tweets, using 1mil+ tweets by 400k+ users.
- Tested to be 90% accurate on a larger database. Heavy use of Apache Lucene library *(Java)* & common NLP features.

## RESEARCH PROJECTS

**Books2Rec: Hybrid Book Recommendation System** — **Jan 2018 – May 2018**
- Built *(in Python)* a hybrid Recommender System, using Goodreads book ratings and book features
- Used SVD and Autoencoders to achieve a RMSE (Root Mean Squared Error) of 0.843
- Available live at books2rec.me

**Relation Extraction using Deep Learning** — **Sep 2017 – Dec 2017**
- Read & implemented *(using Tensorflow)* methods for entity relation extraction from multiple research papers
- Interfaced with a larger NLP pipeline built by a team of 6 people
- Achieved 49% F1-score using CNNs and 51% F1-score using Bi-LSTMs on ACE 2004 dataset

**Financial Analysis using Machine Learning Methods** — **Jan 2016 – Jan 2017**
- Conducted *(in Python)* machine learning based analysis on various stock prices & estimated future prices
- Collected and annotated relevant articles on stocks
- Obtained 54% accuracy (over baseline 50%) with a Hidden Markov Model variant with sentiment analysis

**Monte Carlo Algorithm for Cold Start Recommendation** — **Jan 2016 – Jun 2016**
- Implemented *(in Python)* a research paper on collaborative filtering based Monte Carlo Algorithm for cold-start recommendation
- Decreased MAE (Mean Absolute Error) by 1.8% by using better transition priors and verified results using MovieLens database