DARIN MADUAR

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EDUCATION

BA – Computer Science

Higher School of Economics

#1 ranked Russian University (Forbes)

Sep 2016 – June 2020 Moscow, Russia

Studied computer science with a focus on Machine Learning and Applications.

- Relevant courses: *Machine Learning*, *Computer Vision*, *Deep Learning*, *Bayesian Methods for ML*
- As a top student in linear algebra (top 5%), was invited to work as a teaching assistant and worked with best-performing students for 3 years.
- Took part in many projects and competitions, some of them described below.

PROJECTS

Seniority model: predicting employee seniority

Used unsupervised learning techniques to predict the level of seniority.

- Scrapped publicly available employment history data
- Processed the data using several word embeddings, e.g. Spacy, FastText, GloVe and BERT
- Implemented different ranking models using PyTorch: RankNet, ListNet and my own approaches
- Used bubble-sort distance to evaluate different models performance
- The best model (RankNet + FastText) resulted in 87% sorting accuracy on validation sample
- Created an app on Flask and deployed it to Heroku

ANN: question answering neural network

Built an end-to-end neural network model for reading comprehension, which aims to answer questions from a given passage.

- Preprocessed Stanford Question Answering Dataset (SQuAD) for training (tokenization, stop-word removal, mapping each word to an integer index for further embedding)
- Implemented R-NET approach using Keras as described in this paper
- Used Google Compute Engine API for training on Virtual Machine (NVIDIA Tesla K80)
- F1-score = 88.1% (avg score for human 91.22%)

G2P: grapheme-to-phoneme Neural Network

Built a tool to automatically convert a spelled word to a sequence of IPA symbols.

- Built model based on Long Short-Term Memory (LSTM) recurrent neural network.
- Experimented with unidirectional and bidirectional LSTM and finally achieved 60%+ Mean Absolute Precision
- Reached top-2 result in university group Kaggle competition

EXPERIENCE

Teacher

IQ-center

Sep 2014 – Feb 2022 Moscow, Russia

- Prepared students for math and informatics exam finals. Over the past 2 years, 3 of my students scored the highest mark in the Informatics final exam. The average result of my students last year was 90%.
- Digitized client data collection process: built a CRM system which processes client data and created a dashboard with aggregated data & key metrics, updated in real time

Goto-camp

Taught motivated pupils in 2-week immersive data science bootcamp focused on machine learning, deep learning and communication of results.

SUMMARY

I have a strong quantitative background having graduated from the #1 ranked Russian University (Forbes) and having taught students maths and computer science. I have a theoretical and practical understanding of advanced data analytics and machine learning: from data gathering and processing to model building, testing and deployment which I have demonstrated through my projects.
I am looking for a data scientist role where I would be able to work closely with industry professionals to generate business value.

SKILLS

Programming languages

- Python
- SQL
- C, C++

Tools/Packages

- Probability theory
- Linear algebra
- Pandas
- Numpy/SciPy
- Sci-kit Learn
- NLTK
- SpaCy
- Tensorflow
- PyTorch
- PySpark
- Matplotlib
- Seaborn
- Flask
- XGBoost

Languages

- Russian: native
- English: fluent