Nikola Jovanović

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WORK EXPERIENCE

Improbable, London — *Software Engineer Intern*

JULY 2018 - OCTOBER 2018 | Core Platform

Devised algorithms for delta compression to enable bandwidth savings within the main product; researched and implemented necessary string algorithms and data structures (suffix and LCP arrays, KMP).

Google, Mountain View — *Software Engineer Intern*

JULY 2017 - OCTOBER 2017 | Research and Machine Intelligence

Worked on an NLP problem with queries in a weakly supervised setting; performed feature engineering and used an internal ML tool (Glassbox) to significantly improve the quality of training data for the main model.

Google, Zurich — *Software Engineer Intern*

JULY 2016 - SEPTEMBER 2016 | Knowledge Engine

Built an evaluation tool for my team's product from scratch; used parallel processing tools (Flume) to manipulate large datasets and created a dashboard using basic web technologies (HTML, Javascript).

RESEARCH

Towards Sparse Hierarchical Graph Classifiers — Research paper (2018)

Contributed to research work in the field of graph representation learning, designing and evaluating the pytorch implementation. Under review for Relational Representation Learning workshop at NIPS 2018.

PROJECTS

Digit Tracking — *Machine Learning Course Project (2018)*

Used OpenCV and Keras to detect and track handwritten digits on a sheet of paper in real time via webcam. Achieved perfect accuracy on test examples.

Smallest Width Annulus — *Computational Geometry Course Project (2018)*

Solved the problem of finding the smallest-width annulus enclosing a given point set by computing Voronoi diagrams, farthest-point Voronoi diagrams and their overlay in C++.

Unitary Evolution Recurrent Neural Network —*Machine Learning Summer School Project (2017)*

Devised a TensorFlow implementation of uRNN, a network proposed in Unitary Evolution Recurrent Neural Networks paper [arXiv:1511.06464] during an ML summer school organized by Microsoft. Successfully reproduced the results stated in the paper.

Lambda Calculus and Functional Programming — *High School Graduation Paper (2015)*

Wrote a paper that introduces lambda calculus and functional programming with own proof-of-concept compiler implementation in Haskell. Regarded as the best Computer Science graduation project.

EDUCATION

Faculty of Computing, Union University | Belgrade, Serbia

BSc in Computer Science

Fourth year, GPA 10.0/10.0
(expected graduation July 2019)

TA for Machine Learning, Computational Geometry, Object-Oriented Programming and Introduction to Programming

LANGUAGES

Excellent: C, C++

Good: Python, Java, Assembly

Basic: Haskell, Javascript

COMPETITIONS & AWARDS

ACM-ICPC SEERC Participation (2016, 2015)

International Olympiad in Informatics Bronze (2015)

Balkan Olympiad in Informatics Bronze (2015)

Microsoft Bubble Cup 2nd (2014), Finalist (2018, 2016, 2015, 2013)

Challenge 24 Finalist (2016)

Serbian National Competitions and Olympiads in Informatics 8 participations; 1 gold, 3 silver, and 1 bronze medal

Serbian National Competitions and Olympiads in Mathematics 6 participations; 4 bronze medals

EXTRACURRICULAR ACTIVITIES

Serbian Committee for Competitions in Informatics Organizing all levels of official high school Informatics competitions

MG Computer Science Week Organizing and holding lectures on the annual seminar for prospective high school students