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Experience

Scientific Intern — *IST Austria*
FEB–APR 2020

In the [Machine Learning and Computer Vision Group](#) lead by prof. Christoph Lampert. Conducted an empirical study on why neural networks generalize well, even when they would be expected to overfit (the [double descent](#) phenomenon). Not published yet.

Software Engineering Intern — *Jane Street, London*
JUL–SEP 2019

Development for quantitative trading firm. Worked on a tool used for pricing calculations and then on replacing a part of a system for managing transaction reporting. Used OCaml and SQL.

Data Scientist Intern — *Datamole, Prague*
JUL 2018 – JAN 2019

Worked on projects in various fields including reinforcement learning, time series prediction, anomaly detection and real-time visual object detection. Used Tensorflow, Scikit-learn, NumPy, Pandas, OpenCV, Jupyter.

Software Engineering Intern — *Blue Vision Labs, London*
JUN–SEP 2017

Back-end development for a computer vision startup. Worked in a team, but independently to a high degree. Primarily wrote TypeScript and Python, with occasional C++ and SQL. Was also involved in the hiring process.

Education

Charles University — *Prague*
2017 – PRESENT

Studying **computer science** at the Faculty of Mathematics and Physics. As of time of writing, perfect grades and 196 ECTS-credits in two years. Primarily interested in machine learning, theoretical CS and mathematics.

Studied **philosophy** at the Faculty of Arts during the 17/18 academic year.

Skills & Abilities

Programming since an early age. Professionally worked with **Python, C++, OCaml, JavaScript, TypeScript**. Knowledge of **SQL, Haskell, Java, Go, Matlab, HTML, CSS**.

Knowledge of **Git, Jupyter Notebook, Docker, AWS, GCP, TensorFlow, Pandas**, among others.

Driver's Licence — class B (passenger cars)

Languages

Czech — native

English — fluent (C2 — CAE Grade A)

German — B1

Competitive programming

Wrote 10,000s of lines of C++ during algorithmic programming contests.

International Collegiate Programming Contest
56th place at **ICPC World Finals 2018** (only about 400 out of over 46 000 students advance to this round)

5th place at Central European Regional Contest (CERC) 2019, **advanced to World Finals 2020**. **9th place** at CERC 2018, **6th place** at CERC 2017.

Google Code Jam

143th place in 2018, **107th place** in 2016. Over 20 000 contestants participate each year.

Olympiads

Gold medal (15th place) at the International Olympiad in Informatics 2016

2nd place at the Czech Programming Olympiad (MO-P) 2017

1st place at the Czech Programming Olympiad (MO-P) 2016

Codeforces

In the **top 2%** contestants on Codeforces, the most popular competitive programming platform.

Organizing

Co-organizer of Czech programming competitions **MO-P** and **Kasiopea**; preparing and testing contest tasks.

Projects

acres — *CNN-based barcode sharpening*
2018

A machine learning model for sharpening blurry images of barcodes. Based on convolutional neural networks, implemented in TensorFlow, trained on Google Cloud Platform.

Samorozvrh — *schedule optimization*
OCT 2017 – FEB 2018

A web app which helps students create their schedule by selecting the times of courses, using a constraint programming solver. [Publicly available](#) and updated occasionally.

Blekota — *neural network sound generation*
DEC 2016 – MAR 2017

Using a recurrent neural network, Blekota generates sound mimicking given input sounds. Implemented in pure NumPy, including manually computed derivatives and the RMSprop gradient descent algorithm.

Sup — *schedule-tracking app*
2014

An Android app that automatically tracks changes in students' schedules. Had over 600 total installs. No longer available from Play Store (not maintained).