Václav Volhejn

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Experience

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.

External developer — *RTSmunity, Prague*
SEP–DEC 2016

Back-end Node.js development.

Java teacher — *Stanice techniků Vyšehrad, Prague*
SEP 2015 – JUN 2017

Led the hobby group *Advanced Java* for children ages 12–15.

Education

Charles University — *Prague*
2017 – PRESENT

Studying **computer science** at the Faculty of Mathematics and Physics. Perfect grades as of time of writing.

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

Skills & Abilities

Programming since an early age. Adept at **Python, C++, JavaScript, TypeScript. Knowledge of Haskell, Java, SQL, Go, Matlab, HTML, CSS.**

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

Strong algorithmic thinking proven in programming contests.

Long-time Linux user; knowledge of Bash and the terminal in general.

Driver's Licence — class B (passenger cars)

Languages

Czech — native

English — fluent (C2 — CAE Grade A)

German — B2

Competitive programming

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

ACM-ICPC

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

9th place at Central European Regional Contest (CERC) 2018

6th place at CERC 2017

12th place at CERC 2016 (unofficial participation)

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.

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. Includes JS frontend, Go backend and Python schedule optimizer. 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. Currently at over 600 total installs.