

# Jonáš Kulhánek

<https://jkulhanek.github.io>  
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## EDUCATION

### Charles University

#### MSC IN ARTIFICIAL INTELLIGENCE

Expected Jun 2021

Faculty of Mathematics and Physics

Cum. GPA: N/A

### Czech Technical University

#### BSC IN COMPUTER SCIENCE

Jun 2019

Faculty of Electrical Engineering

Summa cum laude

Cum. GPA: 3.64 / 4.00

Major GPA: 3.74 / 4.00

Final exam grade: A

### Sungkyunkwan University

Dec 2017

College of Sciences and Engineering

One semester visiting student

Cum. GPA: 4.00 / 4.00

### Gymnázium Žďár nad Sázavou

Jun 2016

Secondary school

## LINKS

Github:// [jkulhanek](#)

LinkedIn:// [jonaskulhanek](#)

Twitter:// [jonaskulhanek](#)

StackOverflow:// [kulhanek](#)

## TEACHING

### Introduction to Artificial Intelligence

Teaching assistant | Summer 2020

FEL, Czech Technical University

## SKILLS

### PROGRAMMING

Over 50 000 lines:

C# • Python • JavaScript • C++

Java • React • PyTorch •  $\LaTeX$

Over 5 000 lines:

Haskell • Scheme • Markdown

SQL • YAML • TensorFlow

Familiar:

TypeScript • YAML • Lua • Docker

## LANGUAGES

English C1

Czech native

## EXPERIENCE

### CIIRC | RESEARCHER

Jul 2019 – Nov 2019

- Visual navigation using deep reinforcement learning
- PyTorch, Slurm, Numpy

### TU DELFT | RESEARCHER

Jan 2019 – Nov 2019

- Visual navigation using deep reinforcement learning
- TensorFlow, Keras, Numpy

### VALATRON | BACKEND DEVELOPER

Jun 2018 – Jan 2019

- Architecting Node.js API backend and .NET Core backend
- Working on SPA frontend (React.js)
- Creating Azure Functions
- Node.js, .NET Core, Azure Functions, React.js, ...

### SOFTINUM SYSTEMS S.R.O. | FOUNDER

Feb 2017

### CENTER FOR MACHINE PERCEPTION | RESEARCHER

Feb 2018 – Jun 2018

- Building object detectors using fully convolutional neural networks
- Preparing object detection datasets
- Python, TensorFlow, Numpy, OpenCV, ...

### ALZA.CZ | FULL-STACK DEVELOPER

Jun 2016 – Feb 2018

- Architecting backend (.NET core, WCF, SOA, SQL)
- Designing continuous integration in TFS
- Front-end website development (ASP.NET Web Forms)

### CZECH NEWS CENTER | MOBILE APPLICATION DEVELOPER

Mar 2015 – May 2016

- **Tydenik Reflex** app for Windows Phone – MVVM Light
- **Reflex** app for Windows 8 – MVVM Light
- **Blesk** app for Windows 8 and Windows Phone 8 – build with Prism
- .NET, MVVM Light, Microsoft Prism, sqlite3, XAML

## PUBLICATIONS

### Vision-based navigation using Deep Reinforcement Learning

Sep 2019

Jonáš Kulhánek and Erik Derner and Tim de Bruin and Robert Babuška,  
*2019 European Conference on Mobile Robots (ECMR), 2019, p.1-8*

### Visual Navigation using Deep Reinforcement Learning

May 2019

Jonáš Kulhánek, *Bachelor thesis*