# Hynek **Kydlíček**

SOFTWARE AND DATA ENGINEER

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## Education

**FIT ČVUT (Faculty of Information Technology, CTU in Prague)**　　　　　　　*Prague, Czechia*

BC. IN COMPUTER SCIENCE (UNFINISHED)　　　　　　　*2019 - 2020*

- I decided to transfer to MFF UK, due to lack of depth in CS theory and Maths.

**MFF UK (Charles University, Faculty of Mathematics and Physics)**　　　　　　　*Prague, Czechia*

BC. IN COMPUTER SCIENCE (A.I. MINOR)　　　　　　　*2020 - 2023*

- Bachelor Thesis - Implicit Information Extraction from News, I created the biggest Czech News structured dataset (1.6M+) and trained NLP models using SoTA Czech Transformers. Submitted at TSD-2023.
- During my studies I spent half a year as an exchange student in Umeå University.
- Thanks to the inter-university agreement, I attended several courses at FIT and FEL CTU.

**Prg.ai Minor**　　　　　　　*Prague, Czechia*

A.I. MINOR　　　　　　　*2022 - 2023*

- Successfully completed the required subjects and many more in just a year.

## Skills

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|---:|:---|
| **DevOps** | Docker, Github Actions |
| **Back-end** | Nest.js, Express, ASP.NET Core, Django, REST API |
| **Front-end** | Next.js, React, Blazor, HTML5, Tailwind |
| **Machine Learning** | Pytorch 2.0 + Lightning, Tensorflow 2.0, HuggingFace, Scikit-learn |
| **Data Engineering** | AWS (Redshift, Athena, Amplify, S3, EC2), Apache Hadoop + Spark, Apache Artemis |
| **Programming Languages** | Typescript, Python, C#, Haskell, SQL |
| **Other** | Node.js, LaTeX |
| **Languages** | Czech, English |

## Work Experience

**Edulastic**　　　　　　　*California, USA (Remote)*

BACKEND DEVELOPER　　　　　　　*Jun. 2019 - Jul. 2021*

- Creation of reference solutions for programming assessments.
- Built a maintained Math evaluation engine using python + Antlr4 serving thousands of students.
- Created a REST API, for engine access using flask.

**Freelance**　　　　　　　*Prague, Czechia*

SOFTWARE FREELANCER　　　　　　　*Jul. 2021 - Mar. 2022*

- Pipeline for Compound data extraction of thousands entries from The Graph.
- Template Image Generator for NFT Project.

## Honors & Awards

| 2023 | **Winner**, Prague AI Hackaton | *Prague, Czechia* |
|---|---|---|
| 2018 | **Finalist**, Czech High School Cyber Security Competition | *Prague, Czechia* |
| 2017 | **Finalist**, Czech High School Cyber Security Competition | *Brno, Czechia* |

## Projects

**CmonCrawl**

PYTHON, AWS　　　　　　　 *Github*

- Utility for interaction and extraction from Common Crawl Index.
- Built with modularity and parallelism in mind.

### CZE-NEC

Python, Artemis, Spark, HF Datasets  Github

- The biggest and most complete dataset in Czech,
  containing over 1.6+ well filtered Czech News Articles with various metadata.
- Extracted using CmonCrawl, run distributed with Artemis queue on 30 nodes.

### Translate IT

React, Azure TTS  Github

- Chrome extension for intuitive translation and TTS.

### Washing Manager

ASP.NET Core, Blazor  Github

- Full-stack application for Washing Machine managment, borrows and reservations.
- Automatically applies penalties/prolong borrows if over borrow using service worker.
- Admin UI is created on fly based on model definitions.
- Internalization support with time and language.