

DAVID BURIAN

ML engineer/researcher searching for opportunities to grow

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I am excited about ML solutions that truly help. I strive to quickly understand the problem at hand, design fast feedback loops that propel experiments forward, and power deeper insights. I am passionate about expanding my knowledge and putting to test what I already know.

EXPERIENCE

Rossum

ML research intern

June – September 2024

Developed new deep ML training pipeline to push Rossum's product forward.

Responsibilities:

Designed and debugged **LLM training pipelines**

Evaluated and optimized ML models

Visualized and cleaned training data

Created new data **preprocessing pipelines**

Technologies: **PyTorch** **Pytorch Lightning** **Tensorboard** **Huggingface**

ML research intern

June – September 2023

Combined high-level business goals and insights from multiple teams to deliver actionable results from raw data.

Responsibilities:

Communicated with **multiple teams across the company** in order to understand the problem at hand

Gathered, cleaned and visualized data to generate key insights

Applied **traditional ML techniques** such as clustering and regression

Deriving **actionable results from data analysis**

Connected data patterns with users' behaviour and provided insight into key business metric

Technologies: **PyTorch** **Pandas** **Matplotlib** **Scikit-learn** **AWS S3**

Riptech solutions

Mobile developer

November 2021 – March 2022

Built mobile applications in a dynamic small team.

Responsibilities:

Turned professional designs into real mobile UI

Connected UI with database

Technologies: **Flutter** **Dart** **Bloc** **Google Firestore**

Freelancer

Full-stack web developer

2020 – 2022

Created multilingual, dynamic and custom websites from scratch.

Responsibilities:

Co-designed and created **fully custom** web pages from the ground up

Tackled **internationalization**, **dynamic content** and admin access

fact.cz/en filipkorch.com

Technologies: **React** **NodeJS** **nginx** **Express.js** **MySQL** **SvelteKit**

EDUCATION

Charles University, Comp. Sc.

MSc, Artificial Intelligence 2021 – 2023

Studied ML techniques all the way **from the fundamental methods to large neural networks**. Covering modalities such as sound, image or text, and techniques ranging from unsupervised, semi-supervised, supervised to reinforcement learning.

GPA: 1.00

Specialization: **Neural nets** **ML** **RL**

Evolutionary programming **NLP** **IR**

BSc, Software systems

2016 – 2021

Gained a deep understanding of **data structures**, **algorithms**, and the principles of procedural, **object oriented**, functional programming.

GPA: 1.57

Studied languages: **C#** **Java** **C++**

Python **SQL** **bash**

University of Las Palmas

Erasmus programme

2019 – 2020

Led a small team of students to design and implement small web application.

ACHIEVEMENTS

Finalist in Qminers Hackathon in 2023

Tried to beat artificial bookie in an on-line scenario using ML techniques.

Published a paper about deep sentence embeddings

Co-authored a paper about sentence embeddings, which I later **presented** at LREC conference in 2024.

Master thesis: Document embedding with transformers

Mixed **teacher-student training** and **efficient attention mechanisms** to develop a new way to train text-embedding models with unlabelled data.

LANGUAGES

Fluent in English and Czech. I also speak basic Spanish.