

JOSEF ONDREJ

Machine Learning Engineer / Data Scientist

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in josefondrej

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WORK EXPERIENCE

Senior Machine Learning Specialist

Tipsport

August 2021 – January 2024

- Developed and deployed several machine learning models used for predicting ice hockey match odds from historical data. This enabled the automation of the odds-setting process, resulting in more precise and earlier available odds compared to in-house bookmakers and the competition
- Developed, deployed, and maintained tools and infrastructure enabling the team more efficient development of machine learning models. Including code templates, CI/CD pipelines, experiment tracking server, and tools for continuous monitoring of the model performance
- Developed and deployed a model for identification of fraudulent client behavior

Research Assistant

University of Lucerne

May 2020 – July 2021

- Developed a model for comparison of cost efficiency of Swiss hospitals based on individual patient data and cumulative hospital data. Collaborated with SpitalBenchmark, one of Switzerland's largest hospital organizations, to export the results into their software for use in price negotiations of hospitals with insurance companies
- Created a simulation study to evaluate the reliability of patient care quality indicators that are reported for the Swiss hospitals

Research Scientist

IBM Watson

May 2018 – April 2020

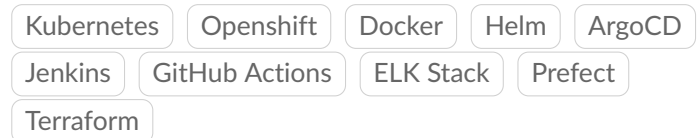
- As a member of a 3-person team developed and delivered into production a feature that enables IBM Watson Assistant chatbots to [learn and improve](#) from interactions with human users, ultimately helping them to get more relevant results faster
- Developed methods for declarative authoring of chatbots
- Received the company's CEE Excellence Award

DEV STACK

Languages/Libs/Tools



DevOps



Data



LANGUAGES

Czech ● ● ● ● ●

English ● ● ● ● ●

German ● ● ● ● ●

COURSES

- Deep Learning Specialization: five courses covering the foundations of deep learning ([certificate](#))
- Machine Learning ([certificate](#))
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning ([certificate](#))

Mathematician

Tipsport

📅 Aug 2014 – April 2018

- Developed several models for calculating odds for different sports including tennis, (beach)volleyball, badminton, and horse racing. These are still [in production](#) today and make about 1M EUR each month for the company
- Responsible for the whole process from scraping data, building and testing the mathematical models, and implementing them as production-ready modules

EDUCATION

Master's degree

Faculty of Mathematics and Physics, Charles University

📅 Sep 2013 – June 2015

- Statistics, probability theory and econometrics
- Diploma thesis: [Expectile regression](#)
- Graduated with honors

Bachelor's degree

Faculty of Mathematics and Physics, Charles University

📅 Sep 2010 – June 2013

- General mathematics and stochastics
- Diploma thesis: [Probability Distributions on Metric Groups](#)
- Graduated with honors

PUBLICATIONS

📅 2023

- Using exogenous organizational and regional hospital attributes to explain differences in case-mix adjusted hospital costs ([link](#))

📅 2022

- Identification and assessment of a comprehensive set of structural factors associated with hospital costs in Switzerland ([link](#))

📅 2019

- Planning for Goal-Oriented Dialogue Systems ([link](#))
- Executing Contingent Plans: Addressing Challenges in Deploying Artificial Agents ([link](#))
- Generating Dialogue Agents via Automated Planning ([link](#))

VOLUNTEERING



Paired kidney exchange solver

Implementation of a graph theory algorithm that arises when planning paired kidney exchanges. Developed in collaboration with and for the purposes of Institute of Clinical and Experimental Medicine, Prague. Still in use today

AWARDS



Winner of 2019 CEE Smart Health Hackathon

with a web-app that helps blind people with diabetes read data from their glucometers



Winner of 2017 Rockaway Hackathon

with a recommender system for e-shops that learns from customer's browsing history