

Marcin Rybok

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Summary

I am a **Python Developer**. I specialise in the fields of **Data Science** and **Machine Learning (ML)**. I graduated from the University of Edinburgh with the title of Master of Informatics. I am passionate about tasks that require analytical thinking and lack a ready solution. I am interested in the practical application of AI algorithms, especially in non-standard domains like the optimisation of communication networks (the topic of my dissertation).

Education



Master of Informatics with Honours

The University of Edinburgh

2022, Edinburgh, UK

- I have completed a five-year Integrated Master's program
- The University of Edinburgh is 22nd in the world QS university ranking



International Baccalaureate Diploma

Prywatne Liceum Ogólnokształcące im. Melchiora Wańkowicza

2017, Katowice, PL

- I have completed the International Baccalaureate Diploma Programme (IB)
- In middle school, I was a laureate of three distinct Regional Subject Olympiads in the Silesian Voivodship, namely in Mathematics, Physics and History

Experience



Data Scientist / Python Developer (Mid)

Institute of Computer Science, Polish Academy of Sciences (IPI PAN)

10/2022 - 7/2023, Warsaw, PL

- Creation of a web crawler scraping product data from online shops
- Implementation of a model recognising the same product in different webshops
- Stack: Python, Scrapy, Playwright, NumPy, pandas, sklearn, Pytorch, Hugging Face



Software Engineer

Konsept by Nagne Studio

2/2021 - 9/2021, Edinburgh, UK

- Implementation of a crawler for scraping web data
- Creation of a web app for data annotation
- Stack: Python, Flask, MongoDB, JavaScript, React, Materialize



Intern Software Engineer

Almar IT

6/2018 - 8/2018, Sosnowiec, PL

- Development of CRM for management of petroleum distributing businesses
- Stack: Java, Spring, Hibernate, PostgreSQL, JavaScript, DataTables, Bootstrap

Languages



English

- Since high school, all of my education was undertaken in English
- I have lived, studied and worked in the UK for 5 years



German

- Goethe-Zertifikat A1
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Skills

- **Python** + Scientific Computing Toolkit (NumPy, SciPy, pandas, scikit-learn, Jupyter)
 - Data visualisation with Matplotlib / seaborn
 - Deep Learning - **PyTorch**
 - Databases - **MongoDB, PostgreSQL**
 - VCS – **Git**
 - **Linux / Bash Script**
 - Virtualisation – Vagrant
 - Front-end - JavaScript, HTML, CSS, Bootstrap, Materialize, React, DataTables
 - Back-end - Flask, Spring Boot
 - Remaining programming languages - **MATLAB, Java, Haskell, Scala, Golang, C**
 - Natural Language Processing (NLP) - experience in using RNNs, Transformers of Hugging Face, BERT, spaCy
 - Implementation of crawlers for web data scraping - Scrapy, Playwright
 - Blockchain - design, implementation in Solidity, optimisation and interaction with Ethereum smart contracts
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Selected projects

Infostrateg III (as part of work for IPI PAN)

- System for the Office of Competition and Consumer Protection (UOKiK)
- Database of consumer opinions about products scraped from the web
- Recommender system that designates products for further laboratory inspection on the basis of negative consumer reviews

Loopix Mix Network Discrete-Event Simulator

- Dissertation thesis
- Implementation of OpenAI gym's API
- Environment for training and testing of reinforcement learning (RL) algorithms
- Simulates the optimisation of anonymity communication networks (mix networks)

Is RGB all you need? The usefulness of depth in semantic segmentation

- Localisation of buildings, cars, trees and roads on drone-captured aerial space images
- The utilisation of data from the LIDAR depth sensor
- Implementation of solutions from academic papers
- Augmentation and fine-tuning of a pre-trained ResNet architecture
- Remote scheduling of experiments on a university GPU cluster

WebSweeper

- Web app for Minesweeper game
 - Includes solver displaying the probability of mine occurrence on each tile of the gameboard
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