

Education

Faculty of Physics, University of Warsaw

MSc Applications of Physics in Biology and Medicine (BSc finished *summa cum laude*) December 2024
Relevant Coursework: Statistical data analysis I-II, Statistical inference, Machine Learning, Calculus I-III, Linear algebra with geometry I-II, Databases and net services, Modeling of complex biological systems, OO programming.
During studies was rewarded with scholarship for best students twice.

Experience

KCR Warsaw, Poland
Statistical Programmer Intern June 2022 - September 2022

- Created script for automated annotation of documents in Python, replacing job manually done in 2 hours.
- Programmed and performed QC tasks on 10+ datasets for clinical trials using SAS language.
- Practiced English, working in international team.
- Successfully completed internship, resulting in receiving job offer.

Centre of New Technologies, University of Warsaw Warsaw, Poland
Student Research Assistant March 2020 - January 2021

- Applied PCA and other statistical methods to protein analysis.
- Utilized specialized Python libraries `numpy`, `scipy`, `matplotlib`, `MDAnalysis` to create dozens of scripts.
- Created several bash scripts to transform data and automate data analysis originating from multiple files.
- Came up with a solution to non-trivial problem of testing differences between sets of correlated data originating partly from one dataset.

Ramp Network Warsaw, Poland
Researcher August 2019 - November 2019

- Mathematically modeled spread revenue of cryptocurrency exchange platform in analytical manner.
- Implemented script analyzing current prices on the market in R.
- Created report for shareholders visualizing quantitative aspects of the product.

Laboratory of Biological Physics, Institute of Physics, Polish Academy of Sciences Warsaw, Poland
Student Research Assistant June 2018 - September 2018

- Realized paid project finished with publication in *Frontiers in Molecular Biosciences*.
- Implemented algorithm to place multiple protein models in box of specific geometry in Python.
- Created script that presents and update results from protein database in Python.

Publications

Chwastyk, M., Panek, E. A., **Malinowski, J.**, Jaskólski, M. & Cieplak, M. Properties of Cavities in Biological Structures—A Survey of the Protein Data Bank. *Frontiers in Molecular Biosciences* **7**, 314 (2020).

I am also mentioned in A.M. Piasek et al., Brewing antioxidants from spent coffee grounds: the optimization of the extraction process and the comparison of aquatic and ethanolic antioxidant extracts (to be published), where I hugely contributed to statistical data analysis.

Skills & Interests

Technical: Python (`pandas`, basics of `PyTorch`), LLMs integrated workflow (including RAG, agents), SQL, R, Linux (`bash` shell), \LaTeX typesetting

Certificates: AI_devs3: Reloaded (in progress)

Scientific: Statistical data analysis & machine learning, data processing and solid mathematical background

Language: English B2 (exp. working in multinational team (KCR) and wrote both theses in it), Polish

Professional Interests: Mathematical modeling, research & development, statistical data analysis, economics

Hobbies: Music, fantasy and science fiction literature, Japanese culture, gym workout, philosophy, history