

Bc. et Bc. Michal Lauer

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Work Experience

- Publicis Groupe**, Data Scientist April 2025 — Current
- Leverage Marketing Mix Modeling to optimize marketing strategies and budgets.
 - Use Python to automate and streamline processes.
- MŠMT**, Data Engineer Aug 2023 — March 2025
- Developed and maintained production **R Shiny applications**.
 - Used **Git** to automate deployment and code validation.
 - Leveraged **Docker**, **Google Cloud Platform**, and **Linux** for automation.
- Rohlik Skillz s.r.o.**, Machine Learning Engineer (*Internship*) May 2024 — Sep 2024
- **Optimized** order predictions by identifying extreme values and missing features.
 - Wrote Python production code for **ML predictions**.
 - Leveraged **Keboola**'s transformations using **Python** and **SQL**.
- IBM**, Data Scientist (*Internship*) May 2023 — July 2023
- Used **PySpark** and **SQL** to analyze, filter, and derive new features.
 - Applied **MLlib** methods (regression, classification).
 - Learned and applied **Git**, **GitHub Actions**, and **Docker**.
- ReMuS**, Data Manager (*Part-time*) March 2022 — Dec 2022
- Successfully delivered 5+ medical analyses in **R** with dynamic Excel outputs and customized HTML/PDF reports.
 - Prepared **R**, **RStudio**, **R Markdown**, and **Git** work standards documentation.
 - Modernized infrastructure with reusable code, semi-automatic analyses, and code best practices.

Freelance Experience

- MŠMT** [🔗](#), R Shiny Engineer 2025 — Current
- coderslab.cz** [🔗](#), Educator 2024 — Current
- doucuji.eu** [🔗](#), Statistics and Data Analysis Tutor 2022 — Current
- nutit.cz** [🔗](#), Data Engineer 2023
- mojestatistika.cz** [🔗](#), Statistician 2022

Education

- M.Sc. Prague University of Economics and Business**, Statistics Sep 2022 — Jun 2025
- Minor in Econometrics.
 - [Bayesian analysis of time-varying volatility models](#) [🔗](#)
- B.Sc. Prague University of Economics and Business**, Data Analytics Sep 2021 — Jan 2025
- Graduated with honors.
 - [Estimating the relative frequency of a binomial distribution using classical and Bayesian approaches in R](#) [🔗](#)
- B.Sc. Prague University of Economics and Business**, Applied Informatics Sep 2019 — Jun 2022
- [Logistic models in esports](#) [🔗](#)

Publications

Hradilek, P., et al. (2023). *Is breastfeeding in MS harmful or not? An answer from real-world Czech data. Multiple Sclerosis and Related Disorders*, 76, 104790.

Aug 2023

[10.1016/j.msard.2023.104790](https://doi.org/10.1016/j.msard.2023.104790) 

Stastna, D., et al. (2024). *The Czech National MS Registry (ReMuS): Data trends in multiple sclerosis patients whose first disease-modifying therapies were initiated from 2013 to 2021. Biomedical Papers*, 168(3), 262–270.

April 2023

[10.5507/bp.2023.015](https://doi.org/10.5507/bp.2023.015) 

Key Projects

MŠMT Data Exploration Application

MŠMT

- Developed an **R Shiny** application for exploring 10,000+ variables offered by the ministry.
- Implemented custom filtering, hierarchical aggregation, and multi-format data export capabilities.
- Optimized data-heavy operations using **Polars** and **asynchronous programming**.

Time-Series Feature Engineering Pipeline

Rohlik Skillz s.r.o

- Designed and implemented automated feature engineering for time-series forecasting models.
- Enhanced model performance through systematic identification of data quality issues.
- Integrated machine learning pipeline with production systems using Python and SQL.

Treatment Switch Analysis Platform

ReMuS

- Statistically analyzed treatment switches among ~ **19,000 patients across 17 treatments** over four years.
- Generated comprehensive Excel reports describing patient treatment histories.
- Created custom Sankey diagrams visualizing treatment progression patterns.

Technologies

R Language: Tidyverse, Tidymodels, Shiny, Quarto, R Markdown...

Python: Polars, pandas, numpy, scikit-learn, statsmodels, FastAPI, MLflow, PySpark...

Data & Cloud: SQL, Docker, Git, Google Cloud Platform, Keboola, Linux...

Visualization: PowerBI, Tableau, ggplot2, plotly..