Mateusz Janowski

Profile

Computational engineering student at AGH University of Science and Technology with a strong foundation in data science, statistics, and AI. Currently expanding academic experience through Erasmus+ studies at ISEP Porto, focusing on applied machine learning and intelligent systems. Experienced in full-stack development, backend logic, and modern data workflows. Passionate about combining software engineering with data-driven insight. Effective in team collaboration, problem-solving, and delivering technical solutions across academic and independent projects.

Contact details

mateu.janowski@gmail.com
+48 501 401 921
Krakow, Poland
GitHub

Personal information

Date of birth: **21 Sep 2003**
Citizenship: **Poland**
Languages: **Polish** (native), **English** (B2), **German** (A2)

Soft Skills

- Teamwork (agile projects), problem-solving, project ownership, adaptability

Education

BSc in Computational Engineering *AGH University of Science and Technology*
2022 – present
- Faculty of Metals Engineering and Industrial Computer Science
- Core topics: Numerical Methods, Simulations, Artificial Intelligence

Erasmus+ Exchange Programme *ISEP – Instituto Superior de Engenharia do Porto*
2024 – 2025
- Coursework in MSc-level Informatics, Data Analysis, Applied Statistics, Advanced Computing Systems, and AI

Projects

- Hospital Management System (2024–2025) – Full-stack medical scheduling platform developed using .NET backend and Angular frontend. Features include multi-role account logic (admin, doctor, patient), operation request forms, staff allocation modules, and calendar-based scheduling. Integrated a logic layer using Prolog for optimising surgery planning and resource constraints. Implemented RESTful APIs and Three.js for 3D visualisation of surgical rooms. Emphasis on modular architecture, clean code practices, data flow consistency, and collaborative agile development.

- Hotel Booking Cancellation Analysis (2024) – Data mining project focused on identifying key factors influencing hotel reservation cancellations. Involved data cleaning, EDA, feature engineering, undersampling techniques, and training various models including Random Forest, Logistic Regression, SVM, boosting methods (XGBoost, LightGBM), and neural networks (MLP). Model performance evaluated with classification reports and confusion matrices.

- Vegetation Classification with Machine Learning (2024) – Designed and implemented a complete ML pipeline for classifying vegetation types. Tasks included data integration, cleaning, handling class imbalance, feature engineering, and training models such as GAM, Random Forest, and SVM. Focus on evaluation and performance tuning.

Academic Contributions

- Web Search and Information Retrieval – Technical seminar delivered at ISEP Porto (2025) on modern search engine architectures and algorithms. Covered crawling, indexing, ranking, and hybrid retrieval models (BM25, DPR, BERT). Emphasised theoretical foundations and applications of information retrieval in AI-driven systems.

Programming Languages

- Python, C++, C, Java, JavaScript, TypeScript, HTML, CSS, SQL, R, Assembly, PROLOG, LaTeX

Frameworks & Tools

- Angular, .NET, Git, Jupyter, Visual Studio, Three.js, TensorFlow, Scikit-learn

Scientific Interests

- Interests in explainable AI, applied data science, algorithmic optimisation, large-scale ML systems, and the integration of classical computing with modern AI techniques.

Awards

- Merit scholarship for top-performing students, AGH University of Krakow

Hobbies

- Martial arts (kung fu), football, cycling, rock climbing, hiking