

Mateusz Śliwa

Data engineer · AI engineer · Python, machine learning, LLMs

Zielona Góra, Poland · remote or hybrid · open to relocation · available now

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github.com/MSliwa01

ecosort.pl

I have an MSc in data engineering and a BA in economics. I built **EcoSort**, an iPhone app on the App Store, and the LLM pipeline behind it, which would rather hold a date back than publish a wrong one. I work with AI coding agents daily, build tools for them and test LLMs before I trust them.

PROJECTS

EcoSort, creator and sole developer

since 2026

Waste collection dates, reminders and widgets for each address · 6 municipalities · ecosort.pl · apps.apple.com/pl/app/ecosort

- Built a pipeline that reads schedules one month or table section per LLM call: two reads with different prompts, a third on disagreement, code checks for holidays, Sundays and rhythm gaps, and my own YOLO detector as a fallback.
- On six hard scans (2,190 cells) the best of three prompt versions got **24.5% of cells wrong**. Over three full runs the pipeline published 82.2% of cells with **no wrong date** and held the other 17.8% back instead of guessing. The ground truth is 966 manual decisions, and the pipeline was tuned on these documents.
- Wrote the FastAPI and PostgreSQL backend with TERYT address matching, a React admin panel, the SwiftUI app, an unreleased Jetpack Compose Android app, a Gemini assistant with PII scrubbing and Docker Compose on a VPS.

Win probability model for Counter-Strike 2, master's thesis

2025–2026

Python, pandas, Parquet, XGBoost, LightGBM, CatBoost, SHAP · FastAPI and React app in Docker

- Parsed recordings of 9,196 professional maps into 16.8 million observations from 187,361 rounds and compared 9 models with match-grouped cross-validation, bootstrap tests and ablations. In quarterly walk-forward tests XGBoost reached **ROC-AUC 0.81–0.82**, with calibration error (ECE) 0.009.

Skin lesion classifier, machine learning course project

2026

PyTorch, Optuna, MLflow, Grad-CAM, Streamlit, Docker

- Trained a custom CNN and a fine-tuned EfficientNet-B0 on the HAM10000 images, with focal loss, class-balanced sampling, MixUp and test-time augmentation. EfficientNet reached **AUC 0.93** and 0.95 recall on malignant lesions.

wwxd ("What would X do?"), open source

2026

Python, Typer, yt-dlp, faster-whisper, rapidfuzz · a Claude Code plugin · github.com/MSliwa01/wwxd

- Turns one person's talks, podcasts and essays into a wiki of their positions; an agent answers "what would X do?" with timestamped quotes, and a script found 158 of 160 of them word for word. A blind judge from another lab (Google) preferred it to plain Claude on **34 of 40** questions. It doesn't predict opinions not yet voiced.

storeshots and maccsim, open source tools for AI coding agents

2026

App Store screenshots · an iOS Simulator for agents on Linux · github.com/MSliwa01/storeshots · github.com/MSliwa01/maccsim

SKILLS

Languages: Python, SQL, TypeScript, JavaScript, Swift, Kotlin, Bash

Data and ML: pandas, NumPy, Parquet, scikit-learn, XGBoost, LightGBM, CatBoost, PyTorch, SHAP, Optuna, MLflow, OpenCV, YOLO, OCR, Selenium

LLM and AI: LLM evaluation, prompt design, Anthropic API, Gemini API, Whisper, Claude Code, Codex, Cursor

Backend and infra: FastAPI, PostgreSQL, SQLAlchemy, Alembic, REST APIs, Docker Compose, Linux, Git

Mobile and web: SwiftUI, Jetpack Compose, React

EDUCATION

MSc in data engineering, University of Zielona Góra

2025–2026

Specialisation in data mining systems · thesis on round win probability in Counter-Strike 2, defended 2026

- Courses included machine learning with scikit-learn and TensorFlow, big data with Hadoop, Hive and Kafka, data warehouses with ETL, OLAP and SQL, Power BI, cloud load balancing, Docker and CRISP-DM.

BA in economics, University of Zielona Góra

2021–2024

- Courses included econometrics in Gretl, statistics in Python, financial analysis, accounting and Excel with VBA.

LANGUAGES AND INTERESTS

Languages: Polish, native · English, C1 with the Cambridge C1 Advanced certificate from 2025 · German, A2

Interests: Chess, 1850 on chess.com · football · cycling · esports data, which is where my thesis topic came from