

TEOFIL SIMIRAS

+40 728 416 290 ◊ teosimiras@gmail.com ◊ github.com/teofilq ◊ Bucharest, Romania

EDUCATION

University of Bucharest

Master's Degree in Probability and Statistics in Finance and Science

October 2025 - Present

Bucharest, Romania

- Relevant Coursework: Stochastic Processes, Bayesian Networks and Hidden Markov Models.

University of Bucharest

Bachelor's Degree in Computer Science

October 2022 - July 2025

Bucharest, Romania

- Relevant Coursework: Signal Processing, Convex Optimization, Numerical Methods.

PROJECTS

Coordinate Descent Optimization for Large Scale Applications

Python, NumPy, Sparse Matrices

Bachelor's Thesis

Mathematical Optimization

- Studied a convex quadratic formulation of PageRank based on Nesterov's work.
- Implemented randomized coordinate descent with uniform and Lipschitz-weighted sampling, exploiting sparse matrix structure.
- Compared convergence and computational cost with power iteration across graph structures.

GMM-HMM for Human Activity Recognition

Python, NumPy, SciPy

Academic Project

Probabilistic Modeling

- Implemented a Hidden Markov Model with Gaussian mixture emissions for activity recognition from multivariate PAMAP2 sensor data.
- Developed supervised and unsupervised training workflows, including preprocessing and interpolation of missing sensor values.

Arrhythmia Detection Pipeline

Python, NeuroKit2, Scikit-learn

Applied Research

Signal Processing

- Built an automated classification pipeline to identify cardiac arrhythmias from ECG signals.
- Applied dictionary learning and standard ML algorithms to process biological signal data.
- Used NeuroKit2 for feature extraction to improve the model's classification performance.

EXPERIENCE

Deutsche Bank

Analyst (Software Engineering & Agentic AI)

July 2026 – Present

Bucharest, Romania

- Develop LLM-based agents and MCP integrations to automate complex banking workflows.
- Analyze business requirements to identify automation opportunities, integration constraints, and operational risks.
- Contribute to architectural decisions and prepare technical design documentation.

SKILLS

Areas of Interest

Programming Languages

Technologies

Numerical Optimization, Probabilistic Modeling, Machine Learning

Python, C++, SQL, MATLAB

Docker, Git, CMake, Linux