Samer Makni

samermakni@outlook.com | +36 20 534 7296
github.com/SamerMakni
Budapest, Hungary

Education

M.S. Computer Science, Óbuda University, John von Neumann Faculty of Informatics 2025
- Thesis Title: Time Series Prediction for the European Electricity Market. Supervised by Ferenc Béres.

B.S. Computer Science, University of Tunis El Manar, Faculty of Sciences of Tunis 2023
- Graduated with high honors (Mention Très Bien).
- Thesis Title: Harnessing Data Encoding Towards Optimizing Machine Learning Algorithms in the Drug Discovery. Supervised by Emna Harigua-Souiai.

Experience

Junior Researcher, SZTAKI, Institute for Computer Science and Control Feb. 2024 - Present
- Developed and implemented multiple machine learning projects for industry Projects.
- Conducted research on geometric deep learning with a focus on explainability.

Research Intern, BIND Research Group, Institut Pasteur Feb. - Sep. 2023
- Preprocessed and analysed large molecular data for usage in ML models.
- Developed python pipeline for training and comparing various machine learning and data-resampling algorithms.

ML Developer, Fabskill| *Part-time* Dec. 2022 - Aug. 2023
- Developed Flask and FastAPI APIs for NLP tasks.
- Worked with vector databases and NLP techniques using word2vec, fasttext, and SBERT.

Projects

CidalsDB | *cidalsdb.streamlit.app* Aug. 2023
- Created a Web Application for Drug Discovery.
- Implemented a classifier to predict molecule activity and search based on chemical similarity.

GKAN | *github.com/SamerMakni/GKAN* July. 2024
- Developed a novel implementation of Kolmogorov-Arnold Networks for graph-structured data.
- Experimented various types of basis functions for GKAN models to enhance performance.

Certifications

IELTS Academic C1 Proficient User, British Council Mar. 2023

Mathematics For Machine Learning, Imperial College London Dec. 2022

Competences

Languages English (*Proficient*), French (*Proficient*), Arabic (*Proficient*), Tunisian Arabic (*Native*)

Technologies Python, SQL (Postgres/MySQL), Git, Bash, JS, LaTeX

Libraries PyTorch, Pytorch Geometric, Pandas, Scikitlearn, Selenium, Beautiful Soup, DeepChem, RDKit.

Publications & Conferences

[1] Harigua-Souiai E, Masmoudi O, Makni S, Rafeh O, Z. Abdelkrim Y, Hamdi S, Souiai O, Guizani I. CidalsDB: An AI-empowered platform for anti-pathogen therapeutics research. *Journal of Cheminformatics*, Accepted for publication.

[2] Makni S, Masmoudi O, Doggaz N, Harigua-Souiai E. Harnessing Data Encoding Towards Optimizing Machine Learning Algorithms in the Drug Discovery. In: *3rd Colloque Jeunes Chercheurs*, Tunis, Tunisia, 2023. Accessible Here