

Curriculum Vitae

Alexandra Tsipourakis, MEng

PhD student in Bioengineering | AI in Healthcare and Predictive Modeling

Personal Statement

PhD student in Bioengineering with a background in Electrical and Computer Engineering, specializing in artificial intelligence applications for healthcare. My current research focuses on predictive modeling, risk stratification, and digital twin approaches for organ transplantation. I have experience in developing machine learning models, analyzing complex biomedical data, signal processing, and contributing to interdisciplinary research projects. I am particularly interested in translating AI methodologies into real-world healthcare applications.

Work Experience

- *Jun 2025 – Feb 2026* | Tutor – AI in Medicine Master’s Program, Università di Torino, Italy
 - ❖ Supervision of MSc theses and research support in AI applications in medicine
 - *Mar 2024 – Oct 2024* | Research Assistant – DISPLAY Lab, Technical University of Crete, Greece
 - ❖ Acquired and analyzed EEG/ECG data for biomedical research applications
 - ❖ Contributed to the development of multimodal wearable health monitoring systems
 - ❖ Co-authored and supported preparation of scientific publications
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Education and Training

- ❖ *Nov 2024 – Present* | PhD in Bioengineering and Medical-Surgical Sciences

Politecnico di Torino & Università di Torino, Italy

Research focus: AI-driven predictive modeling and digital twin approaches for organ transplantation

Skills: Machine Learning, Biomedical Data Analysis, Python programming, teaching

- ❖ *Sept 2018 – Mar 2024* | Diploma in Electrical & Computer Engineering

Technical University of Crete, Greece

- Thesis (10/10): Analysis of Electroencephalography in Epilepsy After Transcranial Brain Stimulation Using Connectivity Models and Machine Learning Methods, Final diploma grade:8.30/10

Personal Skills

Machine Learning, Predictive Modeling, AI in Healthcare, Data Analysis, Signal Processing

Programming: Python, MATLAB, Java, C

Mother Tongues: Greek, Italian **Other Languages:** English: C2, French: C2

Publications

- Tsipourakis Alexandra, et al. The Effect of Multi-Channel tDCS on the Directed Connectivity Patterns of a Case with Focal Epilepsy Using a Multi-Feature Machine Learning Evaluation. In: *2024 IEEE 24th International Conference on Bioinformatics and Bioengineering (BIBE)*. IEEE, 2024. p. 1-8.
 - Alexandra Tsipourakis, Marios Antonakakis, Fabian Kaiser, Stefan Rampp, Stjepana Kovac, Christoph Kellinghaus, Gabriel Möddel, Carsten H. Wolters, Michalis Zervakis
Title: The effect of transcranial Direct Current Stimulation on Dynamic Effective Connectivity EEG Patterns of a Focal Epilepsy Case
Conference: ILAE – 15th European Epilepsy Congress, Rome Italy
Date: 7-11 September 2024
Format: Poster Presentation
 - Alexandra Tsipourakis and Marco Agostino Deriu (2025). Investigating brain connectivity from a signal processing perspective. *Journal of Multiscale Neuroscience*, 4(2): 147-157. DOI: <https://doi.org/10.56280/1702827275>
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Additional Information

IEEE Member, IEEE EMBS Member, Technical Chamber of Greece (Licensed Engineer)