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About

Computer scientist, with a focus on AI, neuroscience and biomedical engineering. My previous research has focused on music cognition and deep learning-based EEG for medical diagnosis. Currently, I'm interested in exploring machine learning methodologies for scientific discovery and clinical applications.

Experience

2017 – 2022 **University of Kent - Doctoral Researcher**
Researched and developed deep learning-based EEG models for automated, end-to-end, real-time monitoring of the depth of anesthesia.

Skills: • Python (*Tensorflow*) • EEG Analysis (*MNE*) • Digital Signal Processing • NeuroInformatics • Machine Learning/Deep Learning • Research Methods

Education

2017 – 2022 **Ph.D. in Computer Science** - University of Kent
Thesis title: *Deep Learning for Electrophysiological Investigation and Estimation of Anesthetic-Induced Unconsciousness.*

2015 – 2016 **M.Sc. in Sound and Music Computing** - Universitat Pompeu Fabra
Grade: 8.53/10
Thesis title: *Neural and Music Correlates of Music-Evoked Emotions.*

2010 – 2015 **B.Sc. in Informatics** - Aristotle University of Thessaloniki
Grade: 8.69/10 (First Class Honours)
Thesis title: *A study of causal interactions during music listening based on EEG signals using estimates of nonlinear correlations.*

Skills

Languages	Greek (*Native*), English (*Proficiency*)
Coding	Python, Java, Matlab, C
ML Libraries	Scikit-learn, Tensorflow, Keras
Misc.	MS Office, LaTeX, Unix Shell, Git, Slurm

Activities and Interests

• Biomedical Engineering
• Evolutionary Biology

• Cognitive Science and Psychology
• Massive Open Online Courses (MOOCs)

• Music Perception and Cognition
• Music Composition and Production

Teaching

2017 – 2021		Introduction to Object-Oriented Programming
2017 – 2019		Advanced Object-Oriented Programming
2019 – 2021		Data Structures and Algorithms
2019 – 2020		Agile Development and Software Security
2018 – 2020		Computing Theory and Concurrent Programming

Research Publications

1 **Patlatzoglou**, **K.** (2022). *Deep learning for electrophysiological investigation and estimation of anesthetic-induced unconsciousness* (Doctoral dissertation, University of Kent,). Retrieved from https://kar.kent.ac.uk/97272/

2 **Patlatzoglou**, **K.**, Chennu, S., Gosseries, O., Bonhomme, V., Wolff, A., & Laureys, S. (2020). Generalized Prediction of Unconsciousness during Propofol Anesthesia using 3D Convolutional Neural Networks. In *2020 42nd annual international conference of the ieee engineering in medicine & biology society (embc)* (Vol. 2020-July, pp. 134–137). doi:10.1109/EMBC44109.2020.9175324

3 **Patlatzoglou**, **K.**, Chennu, S., Boly, M., Noirhomme, Q., Bonhomme, V., Brichant, J.-F., … Laureys, S. (2018). Deep Neural Networks for Automatic Classification of Anesthetic-Induced Unconsciousness. In *Lecture notes in computer science (including subseries lecture notes in artificial intelligence and lecture notes in bioinformatics)* (Vol. 11309 LNAI, pp. 216–225). doi:10.1007/978-3-030-05587-5_21

Conferences and Workshops

Sep 2020		Pattern Recognition in Neuroimaging (PRNI) Summer School, Vienna, Austria
Jul 2020		42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Montreal, Canada **Invited Talk:** *Generalized Prediction of Unconsciousness during Propofol Anesthesia using 3D Convolutional Neural Networks*
May 2020		Brain, Cognition, Emotion and Music (BCEM) Conference, Kent, UK
Nov 2019		Studying Consciousness in the Electrical Brain - Luminous Workshop, Oxford, UK **Poster Presentation:** *Classification and Regression Analysis of Anesthetic States using Electroencephalography and Deep Learning*
Jul 2019		3rd International Summer School on Deep Learning, Warshaw, Poland
Jun 2019		1st Interdisciplinary Research on Brain Network Dynamics (Brandy) Summer School, Terzolas, Italy
Dec 2018		11th International Conference on Brain Informatics, Arlington, Texas **Invited Talk:** *Deep Neural Networks for Automatic Classification of Anesthetic-Induced Unconsciousness*
Sep 2018		Complex Systems Society (CCS) Conference, Thessaloniki, Greece **Invited Talk:** *Classification Analysis of Levels of Consciousness under Anesthesia, using Electroencephalography and Deep Learning Techniques*
Sep 2017		International Symposium on Performance Science (ISPS), Reykjavik, Iceland **Poster Presentation:** *Neural and Music Correlates of Music-Evoked Emotions*