



Ioannis Kyprakis

Research Scientist



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About me

Research scientist with extensive expertise in Data Analysis, Bioinformatics, and Machine/Deep Learning. Proficient in Python, Matlab, and TensorFlow/PyTorch, with over three years of experience applying AI and data-driven solutions in biomedical research. Passionate about leveraging technology for innovative healthcare applications

Skills

- Python, C
- Biosignal Analysis
- Matlab
- Machine/Deep Learning
- Pytorch/Tensorflow
- Fine-tuning Techniques
- Foundation Models
- Data Analysis
- Data Visualization
- Latex
- Multitasking
- Flexible
- Adaptable
- Teamwork
- Leadership
- Reliable

Languages

- Greek (native)
- English (C2)

Education

- 2023–2024 M.Sc. Artificial Intelligence in Healthcare University of Burgundy
Thesis Identification of Parkinson's Disease Facial Symptoms by Utilizing Deep Learning Techniques | Grade: 15.305
- 2022–2024 M.Sc. Informatics Engineering Hellenic Mediterranean University
Grade: 8.70
- 2014–2022 B.Sc. Informatics Engineering Hellenic Mediterranean University
Thesis calculation of vegetation indicators in crops through optical methods and IoT technologies | Grade: 7.56
Link: <https://apothesis.lib.hmu.gr/handle/20.500.12688/10416>

Experience

- Nov 2024–Today Research scientist,
CardiOCARE Project (<https://cardiocare-project.eu>),
Computational BioMedicine Laboratory
Institute of Computer Science-FORTH
- Contribute to data collection, preprocessing, and analysis from clinical centers across Europe, leveraging deep learning techniques on sensor data (H10 Polar Belt, Garmin Venu Smart-watch) to extract –digital– biomarkers for Quality of Life and intrinsic capacity estimation in elderly multimorbid patients.
 - Collaborate with leading institutions, including the European Institute of Oncology (IEO), Bank of Cyprus Oncology Centre (BOCOC), and Karolinska University Hospital, to monitor and assist in data collection progress.
 - Work with interdisciplinary teams from University of Ioannina (UOI), Institute of Computer Science-FORTH, and Stremble Ventures to develop an integrated model tailored to the project's objectives under the Horizon 2020 program.
- Jan 2024–Today Data engineer,
ProMote Project (<https://promote.soc.uoc.gr>),
Computational BioMedicine Laboratory
Institute of Computer Science-FORTH
- Contribute to data collection, curation, and preprocessing of ECG signals acquired from clinical centers across Crete using SEER 1000 devices, focusing on the extraction of heart rate variability (HRV) features in mother–infant dyads.
 - Collaborate with leading institutions, including the University of Crete, FORTH-ICS, and clinical partners, to support high-quality data acquisition and ensure harmonized processing pipelines.
 - Work with interdisciplinary teams from academia and healthcare to provide reliable datasets that enable the study of maternal and neonatal health within the project.
- Mar 24–Oct 24 Research Scientist Intern,
Computational BioMedicine Laboratory
Institute of Computer Science-FORTH
- Focused on research projects related to Parkinson's disease, emphasizing advanced video analysis techniques.
 - Conducted multimodal data collection, preprocessing, and analysis to support project objectives.
 - Delivered weekly presentations to laboratory teams, showcasing findings and progress.
 - Developed expertise in deep learning video models, including state-of-the-art methods for video processing.

Oct 22-Jun 23 Laboratory Assistant Lecturer
Hellenic Mediterranean University

- Served as the instructor for the laboratory courses in Computer Vision and Internet of Things, under the supervision of Dr. Konstantinos Marias and Dr. Spyridon Panagiotakis.
- Assisted in Electronics II coursework (supervised by Dr. Georgios Viskadourous).
- Prepared and organized teaching materials, graded assignments, and provided detailed feedback to students.
- Implemented innovative teaching strategies to enhance student engagement and comprehension.
- Held office hours to address student concerns and provide academic support.

Mar 22-Aug 22 Research Scientist Intern
Hellenic Mediterranean University
Sensor Networking Laboratory

- Conducted research on IoT technologies, focusing on experimental setups, big data collection, and analysis.
- Assisted in Electronics II coursework (supervised by Dr. Georgios Viskadourous).
- Delivered laboratory lectures on IoT technologies and communication protocols.
- Collaborated on multiple IoT-related projects.

Leadership & Activities

2024-Today Organizer and Chair, IEEE EMBS Chapter
Hellenic Mediterranean University

- Established and chaired the IEEE Engineering in Medicine and Biology Society (EMBS) chapter at Hellenic Mediterranean University.
- Organized and led activities, including technical seminars, workshops, and networking events, to promote interdisciplinary research in biomedical engineering.
- Collaborated with institutions such as CS FORTH, General University Hospital of Heraklion, and the University of Crete to foster partnerships and drive impactful initiatives.
- Coordinated chapter elections and strategized goals to enhance member engagement and professional development.

Certificates

Apr 2024	Sequence Models	DeepLearning.AI
	Credential ID: MVFTPLH7NNBG	
Mar 2024	Basic Life Support (BLS)	ERC European Resuscitation Council
	Credential ID: ERC-762-956500	
Dec 2023	The Complete Cyber Security Course : Hackers Exposed!	Udemy
	Credential ID: UC-e4f4311a-a176-4079-99b6-260cbba0d3de	
Nov 2023	Explaining machine learning models	Coursera
	Credential ID: 75TFT7EZW27V	
Apr 2023	Industrial Cyber Security Training Course for Technicians in Industry 4.0	Erasmus+
	Credential ID: 2018-1-ES01-KA203-050493	

Publications

- 2025 S. Gkikas, I. Kyprakis, and M. Tsiknakis, "Tiny-BioMoE: a lightweight embedding model for biosignal analysis," arXiv preprint arXiv:2507.21875, 2025.
- 2025 S. Gkikas, I. Kyprakis, and M. Tsiknakis, "Multi-representation diagrams for pain recognition: Integrating various electrodermal activity signals into a single image," arXiv preprint arXiv:2507.21881, 2025.
- 2025 S. Gkikas, I. Kyprakis, and M. Tsiknakis, "Efficient pain recognition via respiration signals: A single cross-attention transformer multi-window fusion pipeline," arXiv preprint arXiv:2507.21886, 2025.
- 2025 V. Skaramagkas, I. Kyprakis, G. Karanasiou, D. Fotiadis, and M. Tsiknakis, "Towards PTSD Diagnosis Through ECG Anomaly Detection based on Autoencoders", EAI Endorsed Trans Perv Health Tech, vol. 11, Jun. 2025.
- 2024 V. Skaramagkas, I. Boura, G. Karamanis, I. Kyprakis, D. I. Fotiadis, Z. Kefalopoulou, C. Spanaki, and M. Tsiknakis, "Dual stream transformer for medication state classification in parkinson's disease patients using facial videos," npj Digit. Med., vol. 8, no. 1, p. 226, Apr. 2025., <https://doi.org/10.1038/s41746-025-01630-1>
- 2024 V. Skaramagkas, I. Kyprakis, G. S. Karanasiou, D. I. Fotiadis and M. Tsiknakis, "A Review on Deep Learning for Quality of Life Assessment Through the Use of Wearable Data," in IEEE Open Journal of Engineering in Medicine and Biology, doi: 10.1109/OJEMB.2025.3526457
- 2024 V. Skaramagkas, I. Kyprakis, G. S. Karanasiou, D. I. Fotiadis, and M. Tsiknakis, "Towards PTSD Diagnosis Through ECG Anomaly Detection Based on Autoencoders," in Proc. of the 2024 18th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth), 2024, pp. 1-10
- 2023 Pentari et al., "Multi-channel CNN-based emotion recognition using recurrence plot representations of speech," 2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Istanbul, Turkiye, 2023, pp. 4820-4826, doi: 10.1109/BIBM58861.2023.10385734