Sifakis Manos

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Experience

- **University of Crete** *September 2023 - March 2025*
  Graduate Research Assistant Heraklion, Greece
  - Conducted research in the Speech Signal Processing Lab.
  - Applied Machine Learning Methods to Music Information Retrieval tasks.
  - Shared research progress and collaborated closely with academic peers.

- **University of Patras** *September 2019 - February 2021*
  Research and Development Software Engineer Patras, Greece
  - Conducted research in the Audio Group.
  - Analyzed 3D audio with Ambisonics for binaural rendering.
  - Performed perceptual evaluation experiments

Education

- **University of Crete** *September 2022 - March 2025*
  *Master of Science (**M.Sc.**) - Computer Engineering* Heraklion, Greece
  - Grade: 9.29/10

- **University of Patras** *September 2015 - April 2022*
  *Integrated Master of Engineering (**M.Eng.**) - Electrical and Computer Engineering* Patras, Greece
  - Grade: 7.44/10

Projects

- **Deep Learning for Source Separation & Transcription of Cretan Lyra Music** *September 2023 - December 2025*
  Supervised: Dr. André Holzapfel (KTH) & Prof. Yiannis Stylianou (UoC), SSPL Lab [GitHub]
  - Developed a two-stage ML system, Source Separation and Automatic Music Transcription,
  - Achieved state-of-the-art results in fidelity benchmarks against SOUSTA Corpus and Logic Pro X.
  - Developed customer-facing DEMO with plans for real-time Cretan lyra separation/transcription app.

  Key Impact: • First ML-driven Cretan lyra transcription system. • Cultural heritage preservation.

- **Spectral Super-Resolution via Sparse Dictionary Learning** *September 2023 - February 2024*
  Supervised: Dr. Grigorios Tsagkatakis (UoC) | Collaborator: Stelios Perrakis [GitHub]
  - Developed BFGS-optimized sparse dictionary learning for hyperspectral image reconstruction
  - Implemented coupled dictionary learning framework achieving resolution improvement

  Key Impact: • Direct application to remote sensing and spectral imaging

Publications

• Holzapfel, A., & Sifakis, E. (2024). *"How Many Engineers Does it Take to Transcribe a Cretan Dance Tune? Exploring the Potential of Machine Learning for Automatic Transcription."* Presented at the 10th International Conference on Analytical Approaches to World Music (AAWM 2024), June 10-14, 2024, Bologna, Italy.

Skills

- **Programming Languages:** Python, PyTorch, Jupyter Notebooks, SQL, MATLAB, C, JavaScript, HTML
- **ML/AI:** Natural Language Processing, Speech Signal Processing, Machine Learning, Computer Vision
- **Development:** Testing methodologies, Research collaboration
- **Software & Creative Tools:** Adobe Illustrator, Photoshop, Davinci Resolve, Blender

Additional Information

Languages: Greek (Native), English (C2 Proficiency), French (B2)
Interests: Music Performance (Piano, Guitar), Graphic Design & Logo Creation, Video Editing (Short Films, Intros)
Military Service: Completed mandatory service in the Hellenic Army, 80 NGHC-HQ (Kos, Greece, 2025)