EFTHYMIOS (THEMIS) TSAPRAZLIS

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RESEARCH INTERESTS

Contrastive Learning, Multimodal Learning, Self-supervised Learning, Generative AI, Computer Vision, Natural Language Processing

EDUCATION

PhD in Computer Science Aug 2024 - present
University of Southern California *Los Angeles CA, USA*

> *Advisor: Shrikanth Narayanan*

MEng in Electrical and Computer Engineering Sep 2018 - July 2024
National Technical University of Athens *Athens, Greece*

> *Supervisor: Petros Maragos*

RESEARCH EXPERIENCE

Signal Analysis and Interpretation Lab, USC Aug 2024 - present
Graduate Research Assistant *Los Angeles CA, USA*

University of Texas at Austin Nov 2022 - Aug 2024
Research Student *Austin TX, USA*

- Machine Learning Lab (MLL) External Collaborator.
- Performing research on Contrastive Learning for VLP (Vision-Language Pretraining).

Computer Vision and Signal Processing Group, NTUA
Robot Perception and Interaction Unit, Athena Research Center Jan 2024 - July 2024
Research Assistant *Athens, Greece*

- Performing research on Lifelong Learning for robotic agents as part of the PILLAR-Robots project.

National Technical University of Athens Nov 2022 - July 2024
Undergraduate Research Assistant *Athens, Greece*

- Member of Computer Vision, Speech Communication and Signal Processing Lab (CVSP).
- Performing research on Self-Supervision and Contrastive Learning.
- Research co-advised by University of Texas at Austin.

National Centre for Scientific Research "DEMOKRITOS" Sep 2022 - Nov 2022
Research Intern *Athens, Greece*

- Member of Multimodal Analysis Group (MagCIL) of the Computational Intelligence Laboratory at Institute of Informatics and Telecommunications.
- Worked on End-to-End Multimodal Sentiment Systems.
- Created a simple framework with implementations of deep multimodal learning models for sentiment analysis.
- Performed feature extraction using various techniques and wrote training and evaluation code.

PUBLICATIONS

- **Efthymios Tsaprazlis**, Georgios Smyrnis, Alex Dimakis, and Petros Maragos. Enhancing CLIP with a Third Modality. *In NeurIPS 2023 Workshop: Self-Supervised Learning - Theory and Practice*, 2023.

PROFESSIONAL EXPERIENCE

Workable Software   Oct 2023 - Dec 2023
Machine Learning Engineer Intern   *Athens, Greece*

- Member of Data Science Department.
- Performing research on visual information extraction on documents such as resumes and CVs.

SUMMER SCHOOLS

Lisbon Machine Learning School (LxMLS) 2022   Jul 2022
Instituto Superior Technico (IST)   *Lisbon, Portugal*

- Topics: Probability Theory & Linear Algebra, Linear Classifiers, Neural Networks, Sequence Models, Neural Structured Models, Causality.

EIT Digital Platforms for Industry 4.0   Jul 2021 - Aug 2021
Technical University of Munich   *Munich, Germany*

- Applied Computer Vision and Deep Learning models for video surveillance on industrial environments.
- Created a business model and business use-cases.

SKILLS

Programming Languages	**Python**, MATLAB /SIMULINK, C/C++, SQL,
Tools	**PyTorch**, Bash, Jupyter, Git, Flutter, TensorFlow
Theoretical Knowledge	Machine Learning, Deep Learning, Multimodal Learning, Computer Vision,
	Natural Language Processing, Contrastive Learning, Algorithms
Languages	English(Fluent), Greek(Native)

VOLUNTEERING

IEEE ICASSP 2023 Student Volunteer : Served as a student volunteer in the IEEE 48th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Rhodes (2023).

IEEE Computer Society NTUA : Member of the Machine Learning team (2022 - 2023).

IEEE Robotics and Automation Society NTUA : Member of RAS (2020 - 2022).