Georgios Paraskevopoulos

PERSONAL INFORMATION

Place and Date of Birth:	Athens, Greece — 17 September 1991
Address:	26 Doukissis Plakentias, GR15127, Athens, Greece
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Online:	Google Scholar, github

RESEARCH INTERESTS

• Multimodal Representations • Natural Language Processing • Transfer Learning

EDUCATION

PhD student, Computer Science
National Technical University of Athens, Athens, Greee   Current
Advisor - Prof. Alexandros Potamianos
THESIS - "Extraction of deep multimodal representations and application in learning from limited data"

Diploma (5-year joint degree; 300 ECTS) (BEng & MEng), Electrical and Computer Engineering
National Technical University of Athens, Athens, Greee   June 2016
Thesis - "Smart Room Gesture Control using Kinect skeletal data"
Supervisor - Prof. Stefanos Kollias
In collaboration with Dr. Evaggelos Spyrou at NCSR Demokritos

PROFESSIONAL EXPERIENCE

Institute for Speech and Language Processing, Athens, Greece   July 2020 – Current
Associate Researcher. Worked on:
  • Safety4All: The Safety4ALL project aims to engage the customer and trigger his or her involvement
    in a monitor, report and update loop for the validation and enrichment of safety measures.
  • Greek Speech Recognition using Kaldi
  • Natural Language Processing tools

National Technical University of Athens, Athens, Greece   September 2017 – Current
Teaching Assistant. Responsible for the following courses:
  • Pattern Recognition
  • Speech and Language Processing
  • Signals and Systems

Behavioral Signals, Athens, Greece   Dec 2019 – Current
Machine Learning Engineer
  • Domain adaptation of ML models for different use cases
  • Dockerization and performance improvement of deployed models
  • Developed an Automatic Speech Recognition system for Greek language

Amazon Lab126, CA, USA   Aug 2019 – Nov 2019
Applied Research Scientist Internship. Supervisor: Shiva Sundaram

- Worked on multimodal grounding for Automatic Speech Recognition
- Contributed to internal framework for distributed neural network training
- Paper "Multimodal and Multiresolution Speech Recognition with Transformers" accepted for publication in ACL2020 conference

Behavioral Signals, Athens, Greece   April 2018 – April 2019
Machine Learning Engineer
- Improving the performance of Emotion Recognition from speech technology with regard to core KPIs
- Bridging the gap between R&D and production by integrating ML models into CI
- Design and development of baseline NLP models
- Quentin Furhatino demo

National Technical University of Athens, Athens, Greece   May 2017 – May 2019
Research Assisant.
- Worked on Babyrobot EU project. Babyrobot aims to develop state-of-the-art social robotics with application on ASD children inclusion.

Behavioral Signals, Athens, Greece   September 2017 – March 2018
DevOps Engineer
- Developing a CI/CD pipeline with Jenkins
- Establishing a development process based on Code Reviews and Continuous Integration

Intracom Telecom, Athens, Greece   July 2015 – May 2017
SDN/NFV R&D Engineer
- OpenDaylight SDN controller scalability optimization
- NFV accelerator: Automatic NFV workload optimization
- Contributions to OPNFV open-source project. OPNFV aims to create a reference NFV platform through system level integration, deployment and testing.

NCSR Demokritos, Athens, Greece   January 2015 – November 2016
Research Assistant
- Developed my thesis project. Aigaio NUI is a gesture based Natural User Interface for a smart room integrated into the SYNAISTHISI platform.
- Technical presentation of the project available on slideshare and on github.
- Demo video available here (the video is in Greek).

PUBLICATIONS

Melistas T., Giannakopoulos T., **Paraskevopoulos G.** "Lyrics and Vocal Melody Generation conditioned on Accompaniment", In Proceedings of the 2nd Workshop on NLP for Music and Audio (NLP4MusA 2021), [**paper**]

Georgiou E., **Paraskevopoulos G.**, Potamianos A. "M3: MultiModal Masking applied to sentiment analysis", Interspeech 2021, [**paper**]

Zaranis E., **Paraskevopoulos G.**, Katsamanis A., Potamianos A., "EmpBot: A T5-based Empathetic Chatbot focusing on Sentiments", CoRR preprint, (2021), [**preprint**]

Ventoura N., Vassilakis Y., Palios K., **Paraskevopoulos G.**, Katsamanis A., Katsouros V. "Theano: A Greek-speaking conversational agent for COVID-19", In Proceedings of the 1st Workshop on NLP for Positive Impact, 2021, [**paper**]

Karouzos C., **Paraskevopoulos G.**, Potamianos A. "UDALM: Unsupervised Domain Adaptation through Language Modeling", Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, [paper]

Xezonaki D., **Paraskevopoulos G.**, Potamianos A., Narayanan S. "Affective Conditioning on Hierarchical Attention Networks applied to Depression Detection from Transcribed Clinical Interviews", Interspeech 2020

Paraskevopoulos G., Parthasarathy S., Khare A., Sundaram S. "Multimodal and Multiresolution Speech Recognition with Transformers". In Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (2020) [paper]

Paraskevopoulos G., Spyrou E., Sgouropoulos D., Giannakopoulos T., Mylonas P. "Real-time arm gesture recognition using 3D skeleton joint data". Algorithms, 12(5), p.108 (2019) [paper]

Chatziagapi A., **Paraskevopoulos G.**, Sgouropoulos D., Pantazopoulos G., Nikandrou M., Giannakopoulos T., Katsamanis A., Potamianos A., Narayanan S. "Data Augmentation using GANs for Speech Emotion Recognition". Proc. Interspeech 2019 (pp. 171-175). [paper]

Paraskevopoulos, G., Tzinis, E., Ellinas, N., Giannakopoulos, T., Potamianos, A. "Unsupervised low-rank representations for speech emotion recognition". In Proceedings of Interspeech 2019 (pp. 939-943). [paper]

Paraskevopoulos, G., Tzinis, E., Vlatakis, E., Potamianos, A. "Pattern Search Multidimensional Scaling", CoRR preprint, (2018) [preprint], [code]

Tzinis, E., **Paraskevopoulos, G.**, Baziotis, C., and Potamianos, A. "Integrating Recurrence Dynamics for Speech Emotion Recognition". In Proceedings of Interspeech 2018 (pp. 927931). [paper], [code]

Baziotis, C., Nikolaos, A., Chronopoulou, A., Kolovou, A., **Paraskevopoulos, G.**, Ellinas, N., Narayanan, S., and Potamianos, A. "NTUA-SLP at SemEval-2018 Task 1: Predicting Affective Content in Tweets with Deep Attentive RNNs and Transfer Learning". In Proceedings of The 12th International Workshop on Semantic Evaluation (pp. 245255). New Orleans, Louisiana NAACL, 2018. [paper] [code]

Baziotis, C., Nikolaos, A., Kolovou, A., **Paraskevopoulos, G.**, Ellinas, N., and Potamianos, A. "NTUA-SLP at SemEval-2018 Task 2: Predicting Emojis using RNNs with Context-aware Attention". In Proceedings of The 12th International Workshop on Semantic Evaluation (pp. 438444). New Orleans, Louisiana NAACL, 2018. [paper] [code]

Baziotis, C., Nikolaos, A., Papalampidi, P., Kolovou, A., **Paraskevopoulos,** G., Ellinas, N., and Potamianos, A, "NTUA-SLP at SemEval-2018 Task 3: Tracking Ironic Tweets using Ensembles of Word and Character Level Attentive RNNs". In Proceedings of The 12th International Workshop on Semantic Evaluation (pp. 613-621). New Orleans, Louisiana NAACL, 2018. [paper] [code]

Paraskevopoulos, G., Karamanolakis, G., Iosif, E., Pikrakis, A., Potamianos, A., "Sensory-Aware Multimodal Fusion for Word Semantic Similarity Estimation". MultiLearn2017: Multimodal Processing, Modeling and Learning for Human-Computer/Robot Interaction Workshop, in conjuction with EUSIPCO-2017 [paper]

Paraskevopoulos, G., Spyrou, E., Sgouropoulos, D., "A Real-Time Approach for Gesture Recognition Using the Kinect Sensor". In Proceedings of the 9th Hellenic Conference on Artificial Intelligence (pp. 31:1–31:4), Thessaloniki, Greece, SETN 2016.

OPEN-SOURCE PROJECTS AND CONTENT

slp: (WIP) A framework to develop models for natural language and speech processing

Kaldi GRPC server: This is a modern alternative for deploying Speech Recognition models developed using Kaldi.
Pattern Search MDS: A Cython optimized version of Pattern Search Multidimensional Scaling algorithm, implemented as a scikit-learn module
gentemandata: A toolkit to GENerate synthetic MANifold geometry DATAsets
Python Lab: Introductory Python Lab for NTUA Pattern Recognition course. Covers a basic introduction in Python, NumPy, scikit-learn and PyTorch
Python Performance Tutorial: A tutorial on profiling and optimizing Python code
Opensmile-ROS: Integrate Opensmile feature extraction toolkit with ROS
kaldi-docker: Ease up the deployment of Kaldi using docker containers

TECHNICAL SKILLS

ML Frameworks:	PyTorch, scikit-learn, Keras
Programming Languages:	Python, Javascript, Go, Bash, C/C++
Other Libraries/Frameworks:	plot.ly, matplotlib, d3.js, ROS, OpenCV, Kinect SDK
DevOps Tools:	Docker, Jenkins
Testing Frameworks:	pytest, Chai.js
Operating Systems:	Linux, Windows

STUDENTS

Collaborated with MsC students on their theses projects:

- Karouzos Constantinos, Unsupervised Domain Adaptation through Language Modeling

- Xezonaki Danai, Affective Conditioning on Hierarchical Attention Networks applied to Depression Detection from Transcribed Clinical Interviews

- Nikandrou Malvina, An attentive Seq2seq model for Visual Question Answering

LANGUAGES

Greek:	Mother tongue
English:	Fluent — Proficiency, University of Michigan, 2006
German:	Basic Knowledge — Mittelstufe, Goethe Institut, 2005