Giannis Karamanolakis

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EDUCATION

Columbia University in the City of New York, New York   09/2017 - present
- Ph.D. Student in Computer Science
- Current GPA: 4.26/4.00
- Research Areas: Information Extraction, Natural Language Processing, Machine Learning
- Advisors: Luis Gravano and Daniel Hsu

National Technical University of Athens (NTUA), Athens, Greece   09/2011 - 02/2017
- M.Eng. in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)
- Major: Computer Science, GPA: 9.26/10.00 (top 2%)
- Advisor: Alexandros Potamianos
- Thesis: *"Grounding Word Semantic Representations to Acoustic and Visual Perceptual Modalities"*

Nationwide University Entrance Examination score: 19.708 / 20.000 (top 0.1% nationwide)   06/2011

RESEARCH INTERESTS

Machine Learning, Deep Learning, Data Mining, Natural Language Processing and Understanding, Music Information Retrieval, Multimodal Fusion, Recommendation Systems, Active Learning, Probabilistic Graphical Models, Representation Learning, Bayesian Modeling, Multiple Instance Learning

PUBLICATIONS

- **Giannis Karamanolakis** et al. (double-blind submission at WSDM 2019, Melbourne, Australia)

- **Giannis Karamanolakis**, Kevin Cherian, Ananth Narayan, Jie Yuan, Da Tang, and Tony Jebara,
  "Item Recommendation with Variational Autoencoders and Heterogenous Priors",
  RecSys 2018, Deep Learning for Recommender Systems (DLRS) workshop, Vancouver, Canada (to appear)

- **Giannis Karamanolakis**, Elias Iosif, Athanasia Zlatintsi, Aggelos Pikrakis, and Alexandros Potamianos, "Audio-Based Distributional Semantic Models for Music Auto-tagging and Similarity Measurement", EUSIPCO 2017, Multimodal processing, modeling and learning approaches for human-computer/robot interaction (Multi-Learn) workshop, Kos island, Greece

- Georgios Paraskevopoulos, **Giannis Karamanolakis**, Elias Iosif, Aggelos Pikrakis, and Alexandros Potamianos, "Sensory-Aware Multimodal Fusion for Word Semantic Similarity Estimation", EUSIPCO 2017, Multimodal processing, modeling and learning approaches for human-computer/robot interaction (Multi-Learn) workshop, Kos island, Greece

- **Giannis Karamanolakis**, Elias Iosif, Athanasia Zlatintsi, Aggelos Pikrakis, and Alexandros Potamianos, "Audio-Based Distributional Representations of Meaning Using a Fusion of Feature Encodings", Interspeech 2016, San Fransisco, California

PROFESSIONAL AND RESEARCH EXPERIENCE

Machine Learning Engineer   04/2016 - 08/2017

Behavioral Signals, Athens, Greece (remote)
- Trained statistical models for the recognition of core emotions, moods and behaviors from speech
- Examined how speaker interaction patterns provide information about Key Performance Indicators
- Applied **Active Learning** and **Semi-Supervised Learning** algorithms for the extraction of useful information from recorded speech and the corresponding transcriptions

Research Assistant   01/2016 - 06/2017

Institute for Language & Speech Processing, "Athena" Research & Innovation Center, Athens, Greece

- Carried out research under **Audio Signal Processing** and **Multimedia Information Retrieval**
- Used **Deep Learning** for the fusion of multimodal semantic representations
- Participated in "IEEE Signal Processing Cup 2017: Real-Time Beat Tracking" challenge
- Programmed the "NAO" humanoid robot

Lab & Research Assistant   11/2015 - 06/2017

Computer Vision, Speech Communication & Signal Processing Lab, NTUA, Greece

- Developed **Audio-Based Distributional Semantic Models (DSMs)**
- Assisted with the lab sessions of the course "**Pattern Recognition** with Emphasis on **Speech Recognition**"

Research Intern   11/2015 - 02/2016

Computational Intelligence Laboratory, National Center of Scientific Research "Demokritos", Athens, Greece

- Carried out research and developed code in the context of "**Audio Analysis** for **Soundscape Event Detection** and **Quality Estimation** using **Machine Learning** Methods"

FELLOWSHIPS, HONORS & AWARDS

- **Gerondelis Foundation Scholarship,** provided to selected greek students studying in US   06/2018
- **Joseph F. Traub Fellowship,** Columbia University   04/2018
- **Design Challenge Award,** Addressing the Opioid Epidemic, Columbia University   12/2017
- **Presidential (Distinguished) Fellowship**, Columbia University   08/2017 - 05/2022
- **Eurobank EFG Scholarship**, graduating first in high-school nation-wide examinations, Greece   06/2012
- **Hellenic Mathematic Society "Euclides"**, nation-wide math contest, Greece   03/2010
- **Hellenic Mathematic Society "Thallis"**, nation-wide math contest, Greece   02/2009
- **National Tennis Tournament,** 5th place nation-wide, Greece   09/2008

SKILLS

- **Programming:** Python, Keras, Pytorch, Tensorflow, C++, MATLAB, R, C, Java, …
- **Version Control & Project Management Tools**: Git, SVN, JIRA, Jenkins
- **Agile Development:** Scrum, Kanban

SOCIETIES & AFFILIATIONS

- IEEE Signal Processing Society, **Member**, 2016-2017
- EESTEC, **Member**, 2012-2016
- Symphony Orchestra, Municipality of Sitia, **Musician**, 2008-present

EXTRACURRICULAR ACTIVITIES

- **Music**: bass guitar, guitar, clarinet
- **Sports**: tennis, running, windsurfing

REVIEWER ACTIVITIES

- **CSL**: Reviewer (2017) of CSL
- **TETCI:** Reviewer (2017) of TETCI

LANGUAGES

- **English** (fluent), **French** (intermediate), **Greek** (native)