

Giannis Karamanolakis

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EDUCATION

Columbia University in the City of New York, New York 09/2017 - present

- PhD in Computer Science
- Research Area: Data Mining, Machine Learning

National Technical University of Athens (NTUA), Athens, Greece 09/2011 - 02/2017

- BSc & MSc in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)
- Major: Computer Science, GPA: 9.3/10 (top 2%)
- 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**, Elias Iosif, Athanasia Zlatintsi, Aggelos Pikrakis, and Alexandros Potamianos, “Audio-Based Distributional Semantic Models for Music Auto-tagging and Similarity Measurement”, EUSIPCO 2017
- Georgios Paraskevopoulos, **Giannis Karamanolakis**, Elias Iosif, Aggelos Pikrakis, and Alexandros Potamianos, “Sensory-Aware Multimodal Fusion for Word Semantic Similarity Estimation”, EUSIPCO 2017
- **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, pp. 3658-3662, 2016

PROFESSIONAL AND RESEARCH EXPERIENCE

Machine Learning Engineer 04/2016 - 08/2017

Behavioral Signal Technologies, Los Angeles, California

- 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”

HONORS & AWARDS

- **Columbia Design Challenge Award 2017**: Addressing the Opioid Epidemic - our team was one of the winning teams
- **Presidential Fellowship 2017**, Columbia University, Fellowship provided annually to 2 admitted PhD students
- **Scholarship**, Eurobank EFG 2012, Scholarship for graduating first in high school in Nationwide Examinations
- **National Tennis Tournament 2008**, 5th place

SKILLS

- **Programming**: Python, Keras, Pytorch, C++, MATLAB, R, C, Java, Perl, Shell Scripting, HTML/CSS, JavaScript, MySQL, Stan
- **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)