

# Giannis Karamanolakis

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## Research Interests

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Machine Learning, Information Extraction, Natural Language Processing, Deep Learning.

## Professional and Research Experience

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### Graduate Research Assistant

09/2017 - now

*Columbia University, Department of Computer Science, New York, NY, United States.*

Supervisors: Luis Gravano, Daniel Hsu

- Working on "Adaptive Information Extraction from Social Media for Actionable Inferences in Public Health".

### Applied Scientist Intern

05/2019 - 08/2019

*Amazon.com, Seattle, WA, United States.*

Supervisor: Xin Luna Dong (Product Graph Team).

- Worked on Semi-Supervised Learning for Open Information Extraction (pending conference submission).

### Machine Learning Engineer

04/2016 - 08/2017

*Behavioral Signals, Los Angeles, United States (worked remotely from Athens, Greece).*

- Trained statistical models for the recognition of core emotions from conversational speech data.

### Research Assistant

01/2016 - 06/2017

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

Supervisors: Alexandros Potamianos, Aggelos Gkiokas, Vassilis Katsouros.

- Applied Deep Learning for the fusion of multimodal (text, audio, visual) semantic representations.

### Research Intern

11/2015 - 2/2016

*NCSR "Demokritos", Computational Intelligence Laboratory, Athens, Greece.*

Supervisors: Theodoros Giannakopoulos, Stavros Perantonis.

- Developed audio-based classifiers for Soundscape Event Detection and Quality Estimation.

## Education

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### Ph.D. in Computer Science

09/2017 - now

*Columbia University, New York, NY, United States.*

- **Advisors:** Prof. Luis Gravano, Prof. Daniel Hsu. **Current GPA:** 4.26/4.00.

### M.Eng. in Electrical & Computer Engineering

09/2011 - 07/2017

*National Technical University of Athens, Athens, Greece.*

- **Advisor:** Prof. Alexandros Potamianos. **GPA:** 9.26/10.00 (top 2%).
- **Thesis:** "Grounding Word Semantic Representations to Acoustic and Visual Perceptual Modalities".

## Publications

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8. **Giannis Karamanolakis, Daniel Hsu, and Luis Gravano. Leveraging Just a Few Keywords for Fine-Grained Aspect Detection Through Weakly Supervised Co-Training.** In *EMNLP*, 2019 (Oral).
7. **Giannis Karamanolakis, Daniel Hsu, and Luis Gravano. Weakly Supervised Attention Networks for Fine-Grained Opinion Mining and Public Health.** In *EMNLP 5th Workshop on Noisy User-generated Text*, 2019 (Oral).
6. **Giannis Karamanolakis, Daniel Hsu, and Luis Gravano. Training Neural Networks for Aspect Extraction Using Descriptive Keywords Only.** In *ICLR 2nd Workshop on Learning from Limited Labeled Data*, 2019.
5. **Katy Ilonka Gero, Giannis Karamanolakis, and Lydia Chilton. Transfer Learning for Style-Specific Text Generation.** In *NeurIPS Workshop on Machine Learning for Creativity and Design*, 2018.
4. **Giannis Karamanolakis, Kevin Raji Cherian, Ananth Ravi Narayan, Jie Yuan, Da Tang, and Tony Jebara. Item Recommendation with Variational Autoencoders and Heterogenous Priors.** In *RecSys Workshop on Deep Learning for Recommender Systems*, 2018 (Oral).
3. **Georgios Paraskevopoulos, Giannis Karamanolakis, Elias Iosif, Aggelos Pikrakis, and Alexandros Potamianos. Sensory-Aware Multimodal Fusion for Word Semantic Similarity Estimation.** In *EUSIPCO Workshop on Multimodal Processing, Modeling, and Learning Approaches for Human-Computer/Robot Interaction (Multi-Learn)*, 2017 (Oral).
2. **Giannis Karamanolakis, Elias Iosif, Athanasia Zlatintsi, Aggelos Pikrakis, and Alexandros Potamianos. Audio-based Distributional Semantic Models for Music Auto-tagging and Similarity Measurement.** In *EUSIPCO Workshop on Multimodal Processing, Modeling, and Learning Approaches for Human-Computer/Robot Interaction (Multi-Learn)*, 2017 (Oral).
1. **Giannis Karamanolakis, Elias Iosif, Athanasia Zlatintsi, Aggelos Pikrakis, and Alexandros Potamianos. Audio-Based Distributional Representations of Meaning Using a Fusion of Feature Encodings.** In *INTERSPEECH*, pages 3658–3662, 2016 (Oral).

## Fellowships, Honors, and Awards

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<b>Leventis Foundation Scholarship</b> , New York, US	08/2019
<b>Gerondelis Foundation Scholarship</b> , New York, US	06/2018
<b>Joseph F. Traub Fellowship</b> , Columbia University, New York, US	04/2018
<b>Addressing the Opioid Epidemic, Design Challenge Award</b> , Columbia University, New York, US	12/2017
<b>Columbia Engineering Presidential Fellowship</b> , New York, US	08/2017 - 05/2022
<b>Eurobank EFG Scholarship</b> , Athens, Greece	06/2012
<b>Hellenic Mathematic Society “Euclides” &amp; “Thales” Awards</b> , Sitia, Greece	02/2009, 03/2010

## Technical Skills and Reviewer Activity

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**Programming:** Python (PyTorch, Tensorflow, Keras, Pyro), C++, Java, MATLAB, R, C.

**Agile Development & Project Management:** Git, JIRA, Jenkins, Scrum, Kanban.

**Reviewer Activity:** TKDD 2019, NeurIPS 2019, TheWebConf (WWW) 2019, IEEE TETCI 2018, CSL 2017.