

# Georgios Pantazopoulos

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## Education

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### PhD in Robotics and Autonomous Systems

Sep 2021 - present

*Centre for Doctoral Training in Robotics and Autonomous Systems, Heriot-Watt University*

- Accountable Conversational AI for Human-Robot Collaboration supervised by [Arash Eshghi](#), [Alessandro Suglia](#)

### MSc in Artificial Intelligence with Speech and Multimodal Interaction

Sep 2020 - Aug 2021

*Heriot-Watt University*

- Grade: 84/100 (1st with Distinction)
- Thesis: Combine to Describe: Evaluating Compositional Generalisation in Image Captioning, supervised by [Arash Eshghi](#)
- Relevant Courses: Conversational Agents and Spoken Language Processing, Artificial Intelligence and Intelligent Agents, Data Mining and Machine Learning, Statistical Modelling and Analysis, Human Robot Interaction

### BSc & MSc in Electrical and Computer Engineering

Sep 2012 - Jun 2018

*National Technical University of Athens*

- Grade: 7.7 / 10
- Major: Computer Science
- Thesis: Stress Detection from Speech Signals, supervised by [Alexandros Potamianos](#)
- Relevant Courses: Pattern Recognition, Neural Networks and Intelligent Systems, Artificial Intelligence, Computer Vision

## Publications

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### Multitask Multimodal Prompted Training for Interactive Embodied Task Completion

2023 *Conference on Empirical Methods in Natural Language Processing*, [\[paper\]](#)

- [Georgios Pantazopoulos](#), Malvina Nikandrou, Amit Parekh, Bhathiya Hemanthage, Arash Eshghi, Ioannis Konstas, Verena Rieser, Oliver Lemon, Alessandro Suglia

### EMMA: A foundation model for embodied, interactive, multimodal task completion in 3D environments

2023 *Alexa Prize SimBot Challenge Proceedings*, [\[paper\]](#)

- Amit Parekh, Malvina Nikandrou, [Georgios Pantazopoulos](#), Bhathiya Hemanthage, Arash Eshghi, Ioannis Konstas, Oliver Lemon, Alessandro Suglia

### Combine to Describe: Evaluating Compositional Generalization in Image Captioning

2022 *ACL Student Research Workshop*, [\[paper\]](#)

- [Georgios Pantazopoulos](#), Alessandro Suglia, Arash Eshghi

### ViCA: Combining visual, social, and task-oriented conversational AI in a healthcare setting

2021 *23rd ACM International Conference on Multimodal Interaction*, [\[paper\]](#)

- [Georgios Pantazopoulos](#), Jeremy Bruyere, Malvina Nikandrou, Thibaud Boissier, Supun Hemanthage, Sachish Binha, Vidyul Shah, Christian Dondrup, Oliver Lemon

### Data Augmentation using GANs for Speech Emotion Recognition

20th *Annual Conference of the International Speech Communication Association*, [\[paper\]](#)

- Aggelina Chatziagapi, Georgios Paraskevopoulos, Dimitris Sgouropoulos, [Georgios Pantazopoulos](#), Malvina Nikandrou, Theodoros Giannakopoulos, Athanasios Katsamanis, Alexandros Potamianos, Shrikanth Narayanan

### Using Oliver API for emotion-aware movie content characterization

17th *International Conference on Content-Based Multimedia Indexing*, [\[paper\]](#)

- Theodoros Giannakopoulos, Spiros Dimopoulos, [Georgios Pantazopoulos](#), Aggelina Chatziagapi, Dimitris Sgouropoulos, Athanasios Katsamanis, Alexandros Potamianos, Shrikanth Narayanan

## Projects

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### EMMA

Jan 2022 - May 2023

*Alexa Prize Simbot Challenge, Finalist*

- Developed an interactive language-guided agent executing instructions in simulated environments

## Exploring the Role of Patch Resolution for Vision Transformers

University of Edinburgh, 2nd place in the annual IBM Awards

Jan 2022 - Mar 2022

- Pretrained vision transformers with different patch resolution
- Explored the trade-off between performance gains and inference cost on downstream tasks

## Industry Experience

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### Machine Learning Engineer

Behavioral Signal Technologies Inc.

Sep 2018 - Apr 2020

- Developed audio and text models for emotion recognition
- Established pipelines for data collection and annotation from crowdsourcing platforms
- Contributed to the implementation of voice activity detection algorithms
- Carried out research in active learning pipeline to address class imbalances
- Contributed to real-time systems for emotion and hesitation recognition

## Teaching Experience

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### Data Mining and Machine Learning

Lab assistant

Sep 2022 - Dec 2023

- Supervised groups of postgraduate students on their semester project

### Introduction to Natural Language Processing

Teaching assistant

Sep 2023 - Dec 2023

- Contributed to the infrastructure and the coursework of the module
- Supervised groups of students on their semester project

## Technical skills

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### Programming Languages

Python, Matlab, R, C, C++, C#, Java, PDDL, Bash, SML

### Frameworks

PyTorch, PyTorch Lightning, Huggingface, Trax, Keras, scikit-learn, unity

### Development Tools

Weights & Biases, Gradio, AWS, Git, SLURM, Docker, Kubernetes, Jenkins

## Personal Development

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### Generative Adversarial Networks

Coursera - [Deeplearning.ai](#), [\[link\]](#)

5 Feb 2022

- 3 course specialization on building and applying generative adversarial networks

### Reinforcement Learning

Coursera - [University of Alberta](#), [\[link\]](#)

17 Nov 2020

- 4 course specialization on fundamentals of reinforcement learning, sample-based learning, prediction, and control using function approximation

### Natural Language Processing

Coursera - [Deeplearning.ai](#), [\[link\]](#)

7 Nov 2020

- 4 course specialization on probabilistic, sequence, and attention models

## Invited Talks

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### CDT in Robotics and Autonomous Systems 2022 Conference

Heriot-Watt University / University of Edinburgh, [\[slides\]](#)

Oct 2022

## Languages

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- Greek (native), English (fluent), German (basic)

## Extra-curricular Activities

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### IEEE SLT218 Conference

Conference Volunteer

18 Dec 2018

### Half-Marathon Runner

Athens Health Runners Association

5 Feb 2017