# Georgios Pantazopoulos

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# **Education**

#### PhD in Robotics and Autonomous Systems

Sep 2021 - present

CDT in Robotics and Autonomous Systems, Heriot-Watt University, University of Edinburgh

o Thesis: Inductive Biases in Architectures of Modern Visual Language Models, supervised by A. Suglia

# MSc in Artificial Intelligence with Speech and Multimodal Interaction

Sep 2020 - Aug 2021

Heriot-Watt University

- o Grade: 84/100 (1st with Distinction)
- o Thesis: Compositional Generalization in Image Captioning, supervised by A. Eshghi

# MEng in Electrical and Computer Engineering

Sep 2012 - Jun 2018

National Technical University of Athens

- o Grade: 7.7 / 10, Major: Computer Science
- o Thesis: Stress Detection from Speech Signals, supervised by A. Potamianos

# **Publications**

# Evaluating Multimodal Language Models as Visual Assistants for Visually Impaired Users 2025 Annual Meeting of the Association for Computational Linguistics, [paper]

o A.Karamolegkou\*, M.Nikandrou\*, G.Pantazopoulos\*, D.Sanchez, P.Rust, R.Dhar, D.Hershcovich, A.Søgaard

CROPE: Evaluating In-Context Adaptation of Vision and Language Models to Culture-Specific Concepts 2025 Annual Conference of the North American Chapter of the Association for Computational Linguistics, [paper]

o M. Nikandrou, G. Pantazopoulos, N. Vitsakis, I. Konstas, A. Suglia

Shaking Up VLMs: Comparing Transformers and Structured State Space Models for Vision & Language Modeling 2024 Conference on Empirical Methods in Natural Language Processing, [paper]

o G. Pantazopoulos, M.Nikandrou, A. Suglia, O. Lemon, A. Eshghi

Enhancing Continual Learning in Visual Question Answering with Modality-Aware Feature Distillation 2024 ACL Third Workshop on Advances in Language and Vision Research, [paper]

o M.Nikandrou\*, G. Pantazopoulos\*, I. Konstas, A. Suglia

Lost in Space: Probing Fine-grained Spatial Understanding in Vision and Language Resamplers 2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics, [paper]

o G. Pantazopoulos, A. Suglia, O. Lemon, A. Eshghi

Learning To See But Forgetting To Follow: Visual Instruction Tuning Makes LLMs More Prone To Jailbreak Attacks 2024 LREC-COLING Third Workshop on Safety for Conversational AI, [paper]

o G. Pantazopoulos, A. Parekh, Malvina Nikandrou, A. Suglia

# Multitask Multimodal Prompted Training for Interactive Embodied Task Completion 2023 Conference on Empirical Methods in Natural Language Processing, [paper]

o G. Pantazopoulos, M.Nikandrou, A. Parekh, B. Hemanthage, A. Eshghi, I. Konstas, V. Rieser, O. Lemon, A. Suglia EMMA: A foundation model for embodied, interactive, multimodal task completion in 3D environments 2023 Alexa Prize SimBot Challenge Proceedings, [paper]

o A. Parekh\*, M.Nikandrou\*, G. Pantazopoulos\*, B. Hemanthage, A. Eshghi, I. Konstas, O. Lemon, A. Suglia

Combine to Describe: Evaluating Compositional Generalization in Image Captioning 2022 ACL Student Research Workshop, [paper]

o G. Pantazopoulos, A. Suglia, A. Eshghi

#### Data Augmentation using GANs for Speech Emotion Recognition

2019 Annual Conference of the International Speech Communication Association, [paper]

o A. Chatziagapi, G. Paraskevopoulos, D. Sgouropoulos, G. Pantazopoulos, M.Nikandrou, T. Giannakopoulos, A. Katsamanis, A. Potamianos, S. Narayanan

# **Projects**

Retrievit Jan 2025 - Jun 2025

Heriot-Watt University

Benchmarking Transformers, State Space Models, and Hybrid models on long sequence modeling

**EMMA** Jan 2022 - May 2023

Alexa Prize Simbot Challenge, Finalist [code]

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

# **Exploring the Role of Patch Resolution for Vision Transformers** University of Edinburgh

Jan 2022 - Mar 2022

o Explored the trade-off between performance gains and inference cost on downstream tasks

# **Industry Experience**

AI Research Intern Jun 2025 - present

Alan Turing Institute

Worked on thinking models for GUI agents

Developed ranking models for filtering noisy data for training GUI agents

**Software Engineer Intern** 

Feb 2025 - Apr 2025

Reka AI

Implemented constrastive methods for image-to-image, image-to-video, image & text-to video retrieval

#### **Machine Learning Engineer**

Sep 2018 - Apr 2020

Behavioral Signal Technologies Inc.

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

# **Teaching Experience**

 $A\theta NLP 2024 / 2025$ Sep 2024 / Sep 2025

Summer School Teaching Assistant, [code]

Developed the lab materials for sequence modeling and multimodal models

#### **Data Mining and Machine Learning**

Sep 2022 - present

Teaching Assistant

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

#### **Introduction to Natural Language Processing**

Sep 2023 - present

Teaching Assistant

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

# Technical skills

Python, Matlab, R, C, C++, C#, Java, PDDL, Bash, SML **Programming Languages** 

Frameworks PyTorch, Hugging Face, PyTorch Lightning, Faiss, Milvus, Trax, Keras, scikit-learn **Development Tools** 

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

# **Invited Talks**

#### Visual Grounding in Multimodal Language Models

Jun 2025

Alan Turing Institute, [slides]

Embodied MultiModal Agent for Language-guided Action Execution in 3D Simulated Environments

Oct 2022

CDT in Robotics and Autonomous System Conference, [slides]

#### **Honors & Awards**

# Evaluating Multimodal Language Models as Visual Assistants for Visually Impaired Users

Jul 2025

Pioneer Center of AI Best Paper Award, ACL 2025 SAC Highlights

# **Exploring the Role of Patch Resolution for Vision Transformers**

Mar 2022

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

# **Academic Service**

Jun 2024 / Oct 2024 / Jun 2025 ARR Reviewer

**IEEE SLT218 Conference** 

**Dec 2018**