Georgios Pantazopoulos

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Education

PhD in Robotics and Autonomous Systems   **Sep 2021 - present**
Centre for Doctoral Training in Robotics and Autonomous Systems, Heriot-Watt University

- 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

- Grade: 84/100 (1st with Distinction)
- Thesis: Combine to Describe: Evaluating Compositional Generalisation in Image Captioning, supervised by Arash Eshghi

MEng 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 A. Potamianos

Publications

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*]

- 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*]

- **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*]

- 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*]

- **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*]

- **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*]

- **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*]

- 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*]

- **G. Pantazopoulos**, A. Suglia, A. Eshghi

ViCA: Combining visual, social, and task-oriented conversational AI in a healthcare setting
2021 23rd ACM International Conference on Multimodal Interaction, [*paper*]

- **G. Pantazopoulos**, Jeremy Bruyere, M.Nikandrou, Thibaud Boissier, Supun Hemanthage, Sachish Binha, Vidyul Shah, Christian Dondrup, O. Lemon

Data Augmentation using GANs for Speech Emotion Recognition
2019 Annual Conference of the International Speech Communication Association, [*paper*]

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

Projects

EMMA   **Jan 2022 - May 2023**
Alexa Prize Simbot Challenge, Finalist

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

Exploring the Role of Patch Resolution for Vision Transformers   **Jan 2022 - Mar 2022**
University of Edinburgh, 2nd place in the annual IBM Awards

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

Industry Experience

Software Engineer Intern   **Feb 2025 - April 2025**
Reka AI.

o Worked on image-to-image, image-to-video, image & text-to video retrieval

Machine Learning Engineer   **Sep 2018 - Apr 2020**
Behavioral Signal Technologies Inc.

o Developed audio and text models for emotion recognition
o 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
o Contributed to real-time systems for emotion and hesitation recognition

Teaching Experience

AθNLP 2024   **Sep 2024**
Summer School Teaching Assistant, [code]

o Developed the lab materials for sequence modeling and multimodal models

Data Mining and Machine Learning   **Sep 2022 - present**
Teaching Assistant

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
o Supervised groups of students on their semester project

Technical skills

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

CDT in Robotics and Autonomous Systems 2022 Conference   **Oct 2022**
Heriot-Watt University / University of Edinburgh, [slides]

Personal Development

Generative Adversarial Networks   **Feb 2022**
Coursera - Deeplearning.ai, [link]

Reinforcement Learning   **Nov 2020**
Coursera - University of Alberta, [link]

Natural Language Processing   **Nov 2020**
Coursera - Deeplearning.ai, [link]

Academic Service

ARR Reviewer   **Jun 2024 / Oct 2024**

IEEE SLT218 Conference   **Dec 2018**
Conference Volunteer