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

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: 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

o Grade: 7.7 / 10
o 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 arXiv, [*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

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

o **G. Pantazopoulos**, J. Bruyere, M.Nikandrou, Thibaud Boissier, S. Hemanthage, S. Binha, V. Shah, C. Dondrup, O. Lemon

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

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   **Jan 2022 - Mar 2022**
University of Edinburgh, 2nd place in the annual IBM Awards

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

Industry Experience

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

- Worked on 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
- 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

AθNLP 2024   **Sep 2024**
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

- Supervised groups of postgraduate students on their semester project

Introduction to Natural Language Processing   **Sep 2023 - present**
Teaching Assistant

- Contributed to the infrastructure and the coursework of the module
- 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