

NIKOLAOS STYLIANOU

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Nikolaos is a Senior Machine Learning Research Scientist at the Omilia - Conversational Intelligence, where he leads the Agentic and post-training model efforts; and an Adjunct Lecturer in the School of Informatics, Aristotle University of Thessaloniki. His research interests include NLP and ML, focusing on self-supervised learning, solving knowledge-intensive tasks, compositional generalisation, and designing data-efficient and robust deep learning models. Nikolaos routinely publishes in top-tier AI conferences and journals, and delivers research solutions in the form of products to real world problems affecting businesses and customers. He is actively participating in EU research projects (H2020, ISF, etc.), performing collaborative research across borders, and serves as Expert for the European Innovation Council of the European Commission. Nikolaos collaborates closely with researchers across both academia and industry.

EXPERIENCE

Industry Experience

Omilia - Conversational Intelligence

Senior Machine Learning Scientist

NLP Research Scientist

Dec 2024 – present

Feb 2026 – present

Dec 2024 – Feb 2026

European Innovation Council - European Commission

Expert Evaluator, EIC Accelerator

Jan 2025 – present

Supreme Joint War College

Developer and Systems Analyst

Dec 2015 – Aug 2016

Research Experience

Information Technologies Institute (ITI/CERTH)

Postdoctoral Research Fellow

Mar 2022 – Nov 2024

Aristotle University of Thessaloniki

Postdoctoral Research Fellow

Nov 2021 – Feb 2022

Aristotle University of Thessaloniki

Research Assistant, with Ioannis Vlahavas

Apr 2017 – Nov 2021

Academic Experience

Aristotle University of Thessaloniki

Acting Adjunct Lecturer, NIS-08-02 Operational Research and Business Intelligence

Feb 2022 – present

EDUCATION

Aristotle University of Thessaloniki

Doctor of Philosophy, Computer Science

-Thesis: Natural Language Processing & Information Extraction — Advisor: Ioannis Vlahavas

2017 – 2021

University of Essex

Master of Science, Big Data and Text Analytics

- Thesis: Sentiment Analysis on Social Media — Advisor: Massimo Poessio

2014 – 2015

University of Essex

Bachelor of Science, Computer Science

- Thesis: Personalised Search Engine — Advisor: Udo Kruschwitz

2011 – 2014

TECHNICAL AND PERSONAL SKILLS

Programming/markup Languages:

Proficient in Python, Java, C++, LaTeX, Markdown
Also ability with Matlab, SQL, PHP, JavaScript, HTML

Technological Skills:

Proficient in Pytorch, Tensorflow, JAX, NumPy/SciPy, Matplotlib
Also ability with SLURM, Docker, and AWS

Research Skills:

Good mathematical background, good writing skills, works well in a team and can lead projects.

Languages:

Proficient in English and Greek (First Language)

SELECTED PUBLICATIONS (See [Google Scholar](#) for a full list)

Vlachos, C., **Stylianou, N.**, Fiotaki, A., Methenitis, S., Palogiannidi, E., Stafylakis, T., & Androutsopoulos, I. (2025, August). "Building Open-Retrieval Conversational Question Answering Systems by Generating Synthetic Data and Decontextualizing User Questions". In Proceedings of the 26th Annual Meeting of the Special Interest Group on Discourse and Dialogue (pp. 641-657).

Stylianou, N., Tsikrika, T., Vrochidis, S., & Kompatsiaris, I. (2024, December). "Cross-Domain Hate Speech Detection for Content Moderation in Greek Social Networks". In 2024 IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT) (pp. 373-379). IEEE.

Stylianou, N., Chatzakou, D., Tsikrika, T., Vrochidis, S., & Kompatsiaris, I. (2023, March). "Domain-aligned Data Augmentation for Low-resource and Imbalanced Text Classification". In European Conference on Information Retrieval (pp. 172-187).

Stylianou, Nikolaos and Ioannis Vlahavas. "TransforMED: End-to-End Transformers for Evidence-Based Medicine and Argument Mining in medical literature" *Journal of Biomedical Informatics* 117 (2021): 103767

Stylianou, Nikolaos and Ioannis Vlahavas. "A Neural Entity Coreference Resolution Review." *Expert Systems With Applications* 168 (2021): 114466

Stylianou, Nikolaos and Ioannis Vlahavas, "ET: Entity-Transformers. Coreference augmented Neural Language Model for richer mention representations via Entity-Transformer blocks." in: Proceedings of the Third Workshop on Computational Models of Reference, Anaphora and Coreference, Association for Computational Linguistics, Barcelona, Spain (online). pp. 1-10.

Stylianou, Nikolaos, Gerasimos Razis, Dimitrios G. Goulis, and Ioannis Vlahavas. "EBM+: Advancing Evidence-Based Medicine via two level automatic identification of Populations, Interventions, Outcomes in medical literature." *Artificial Intelligence in Medicine* 108 (2020): 101949.

OTHER EXPERIENCES

University of Essex, Student's Union

Sep 2012 – Jul 2014

Vice President of Hellenic Society

Organised activities for society members and charity events.

University of Essex, Student's Union

Sep 2012 – Jul 2012

Charity and Fundraising committee member

Part of the committee responsible for organising and running charitable and fundraising events as well as working with the Student Union's volunteering team to provide support to the local community.

AWARDS

Academic

State Scholarships Foundation (IKY) - Full Graduate Scholarship

2018

Miscellany

Tae Kwon Do: Red Belt

SERVICE

Teaching

Aristotle University of Thessaloniki, School of Informatics

Teaching assistant, AI101 Machine Learning

Apr 2017 – Jul 2021

Teaching assistant, NCO-04-02 Artificial Intelligence

Apr 2017 – Jul 2021

University of Essex, CSEE Department

Peer Mentor

Sep 2013 – Jul 2014

Academic Service

Journals

Journal of Biomedical Informatics, Expert Systems with Applications, Artificial Intelligence in Medicine, Neural Computing and Applications, International Journal of Artificial Intelligence Tools

Conferences

Program Committee

46th–48th ACM SIGIR Conference on Research and Development in Information Retrieval, 45th–47th European Conference on Information Retrieval (ECIR), Association for Computational Linguistics (ACL-ARR) (2021–2023), European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD) (2024–2025), 14th-15th Conference and Labs of the Evaluation Forum (CLEF) (Program Committee), 18th International Conference on Artificial Intelligence Applications and Innovations (AIAI), EETN Conference on Artificial Intelligence 2018 (SETN)