




DEMETRIS PASCHALIDES

Research Assistant @ LInC

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SHORT BIO

I am currently a post-doctoral researcher at the Laboratory of Internet Computing (LInC) in the Computer Science Department of the University of Cyprus. I received my Ph.D. in 2024, following an M.Sc. (2018) and a B.Sc. (2016) in Computer Science from the same institution. My research focuses on online hate speech, disinformation, and polarization, employing Natural Language Processing (NLP), Machine Learning, and Deep Learning, to model, detect, quantify, and analyze the spread of misleading and harmful content online. At LInC, I have worked as research assistant and technical lead on several EU- and nationally funded projects, such as MANDOLA, Check-It, POLAR, and ATHENA. In these projects, I have played a key role in both research and development efforts, helping build robust tools for real-world application. My work has been published in leading venues including ACM TOIT and TSC, ICWSM, OSNEM, ASONAM, and IEEE/ACM WI. My broader interests lie in NLP, social media mining, and computational social science, with a strong emphasis on addressing the societal impacts of digital media.

WORK EXPERIENCE

Dec. 2024 - Present **Postdoctoral Fellow | Laboratory of Internet Computing (LINC)** (University of Cyprus)

Technical Lead on ATHENA, an EU H2020 co-funded project which aims to strengthen Europe's resilience against Foreign Information Manipulation and Interference (FIMI) by enabling early detection, behavioral analysis, and impact assessment of such campaigns. As Technical Lead, I reverse-engineer FIMI tactics, techniques, and procedures (TTPs), and develop AI-driven pipelines using large language models to detect manipulation strategies and coordinated influence efforts.

Sept. 2023 - Present **Adjunct Lecturer | Department of Computer Science** (University of Cyprus)

Principal Lecturer for the following:

- **MAI623:** Natural Language Processing (MSc in Artificial Intelligence)
- **DSC514:** Natural Language Processing (MSc in Data Science)
- **EPL037:** Data Manipulation using Python (BSc in Economics)

Sept. 2023 - Present	Adjunct Lecturer Department of Computer Science (University of Nicosia) Principal Lecturer for the following: <ul style="list-style-type: none"> ■ COMP-446: Web and Social Data Mining (BSc in Computer Science and Data Science)
Jan. 2022 - Oct. 2023	Natural Language Processing Engineer Skillfill.ai Designed and trained AI models to extract skills from CVs using NLP, analyze evolving skill demands in the technology sector, and automatically generate relevant job listings through machine learning and large language models.
June. 2016- Dec. 2024	Research Assistant Laboratory of Internet Computing (LINC) (University of Cyprus) Contributed to the following research projects: <ul style="list-style-type: none"> ■ POLAR, a RIF-funded national project focused on the modeling, extraction, and analysis of social and political polarization in news media. I was the sole contributor, identifying the theoretical framework, proposing a multi-level computational polarization model, and leading the development of an unsupervised AI pipeline to extract polarization knowledge from text. ■ SYNERGY, an EU H2020 co-funded project, explores value creation in Big Energy through synergetic energy-as-a-service applications using trusted multi-party data sharing and AI analytics. I contributed to the design and execution of multi-source energy data analytics, supporting decision-making in energy management. ■ Check-It, a project funded by the Google Digital News Initiative, focused on combating online misinformation and promoting media literacy. I engineered features and trained deep learning models to detect fake news articles and identify misinformation-prone social network users. I also contributed to the development of a browser plugin for real-time misinformation alerts. ■ ENEDI, a project under the Interreg V-A Greece–Cyprus cooperation programme, aimed to implement innovative energy management in Data Centers. I developed a multi-source monitoring system for photovoltaics, sensors, and data center resources; implemented storage, visualization, and analytics pipelines; and prototyped dynamic workload migration between centers based on real-time energy efficiency policies. ■ MANDOLA, an EU-funded project (REC Framework), focused on the monitoring and detection of online hate speech. I developed and deployed machine learning models trained on expert-labeled Twitter data, built infrastructure for real-time classification and visualization, and created a mobile app and dashboard to promote awareness in countering hate speech online.
Fall 2017, Fall 2016	Teaching Assistant , Department of Computer Science, University of Cyprus for course EPL425 – Internet Technologies (BSc in Computer Science)
June 2014 – August 2014	Research Intern Software Engineering and Internet Technologies Laboratory SEIT (University of Cyprus) Developed a web-based tool for analyzing license compatibility using the SPDX standard and David A. Wheeler’s license compatibility model.

EDUCATION

Jan. 2018 – Dec. 2024	Ph.D. in Computer Science , <i>University of Cyprus</i> Thesis: Unsupervised Extraction and Analysis of Polarization from Large-scale Text-based Corpora, with Applications to Misinformation Detection
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Sept.2016 – **MSc in Computer Science, University of Cyprus**

Dec. 2018 Grade: 8.60/10.

Thesis: Detecting Online Hate-speech

Sept.2012 – **BSc in Computer Science, University of Cyprus**

June 2016 Grade: 8.09/10.

Thesis: Open Source Software Licenses Text Analysis and Modelling

Sept.2007 – **Palouriotissa Lyceum, Nicosia, Cyprus**

June 2010 Grade: 19.58/20

PUBLICATIONS

ALL PEER-REVIEWED

- 2025 D. Paschalides, G. Pallis, M. D. Dikaiakos, "Adopting Beliefs or Superficial Mimicry? Investigating Nuanced Ideological Manipulation of LLMs", to appear in Proceedings of the International AAAI Conference on Web and Social Media (ICWSM), 2025.
- D. Paschalides, G. Pallis, M. Dikaiakos, "A Framework for the Unsupervised Modeling and Extraction of Polarization Knowledge from News Media", ACM Transactions on Social Computing (TSC), Vol. 8, 2025.
- 2024 D. Paschalides, G. Pallis, M. Dikaiakos, "PARALLAX: Leveraging Polarization Knowledge for Misinformation Detection", Proceedings of the 2024 International Conference on Advances in Social Networks Analysis and Mining (ASONAM '24), 2024.
- 2021 D. Paschalides, G. Pallis, M. D. Dikaiakos, "POLAR: A Holistic Framework for the Modeling of Polarization and Identification of Polarizing Topics in News Media", Proceedings of the 2021 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM '21).
- D. Paschalides, C. Christodoulou, K. Orphanou, R. Andreou, A. Kornilakis, G. Pallis, M. Dikaiakos, E. Markatos, "Check-It: A Plugin for Detecting Fake News on the Web", Online Social Networks and Media, Vol. 25, Special Issue on Misinformation on the Web, 2021.
- 2020 D. Paschalides, D. Stephanidis, A. Andreou, K. Orphanou, G. Pallis, M. Dikaiakos, E. Markatos, "MANDOLA: A Big-Data Processing and Visualization Platform for Monitoring and Detecting Online Hate Speech", ACM Transactions on Internet Technology (TOIT), Vol. 20, Special Issue on Emotions in Conflictual Social Interactions, 2020
- 2019 D. Paschalides, A. Kornilakis, C. Christodoulou, R. Andreou, G. Pallis, M. Dikaiakos, E. Markatos, "Check-It: A Plugin for Detecting and Reducing the Spread of Fake News and Misinformation on the Web", Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence (WI '19)
- 2017 G. M. Kapitsaki, D. Paschalides, "Identifying Terms in Open Source Software License Texts", Proceedings of the 24th Asia-Pacific Software Engineering Conference (APSEC), 2017

2016 D. Paschalides, G. M. Kapitsaki, "Validate your SPDX Files for Open Source License Violations", Proceedings of the 24th ACM SIGSOFT International Symposium on Foundations of Software Engineering (FSE 2016)

MENTORING & SUPERVISION:

BSc and MSc Theses Two students working on analyzing polarization levels preceding the 2024 US Presidential elections. In addition, they work on fine-tuning LLMs for polarization knowledge extraction from news articles.

Mentoring and Supervision of Lab Interns A student working on his BSc thesis on computational polarization to model polarization in Twitter using the method introduced by Guerra et al. 2013 using community boundaries.

TALKS:

2025 "Disinformation and real estate exploitation: The case of Varosha" Invited talk as part of EU Disinfo Lab webinars, April 2025

2024 "FIMI Campaigns: Threats, Analysis, Mitigation." Invited talk at the Conference on Research and Innovation in Defense, organized by the Ministry of Defense of the Republic of Cyprus, Nicosia, Cyprus, May 2024

2019 "In mitigating Fake news and Hate-speech: Are we winning?", Invited talk at Disinformation Battles: The tools to fight it in the Digital Era, Limassol, Cyprus, July 2019

2017 "Technologies to Detect, Analyze and Report Online Hate Speech: The MANDOLA Experience", International workshop From Online Hate Speech to cyberterrorism: Freedom of expression VS Security: what regulations are possible? Montpellier, France February 2017

AWARDS & RECOGNITIONS:

2019 1st Place in 1st Cyber Security-Cyber Defence Hackathon, Cyprus

2018 1st Place in 2nd Open Data Hackathon, Cyprus

2018 Winner of "Smart Cities Challenge" in 2nd Open Data Hackathon, Cyprus

2016 4th Place in Next Web Ninja Competition in Cyprus 2016 with *#whatahashtag*

PERSONAL SKILLS:

Skills and Expertise Python, R, Java, Bash, HTML, CSS, JavaScript, C, SQL, VisualBasic, Liquid, SPARQL, PHP, XML, Sass, Jade, UNIX, Linux, Windows, Android, IOS, Pandas, Numpy, PyTorch, Transformers, Jupyter Notebook, R Studio, Docker, Microsoft SQL Server, Apache Jena, Eclipse, IntelliJ IDEA, Git, Bootstrap, Jekyll, Gulp, Bower, Maven, Laravel, NodeJS, MongoDB, Apache Spark, Kafka, Flask, MALLET, Photoshop, Illustrator, NoSQL, AWS, GCP, Sagemaker

