

# Konstantinos Skianis

Assistant Professor [CSE@UOI](mailto:CSE@UOI), Founder [BLUAI-PrimeHost](#)

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## AREAS

Natural Language Processing, Deep Learning, Machine Learning, Data Science

## PROFESSIONAL EXPERIENCE

**Assistant Professor, University of Ioannina**  
Department of Computer Science & Engineering

March 2024 - present

**Co-founder, R&D, PrimeHost**  
Building an AI Superhost for Short Term Rentals

October, 2023 - present

**Founder, R&D, BLUAI**  
AI, NLP, ML solutions and consulting

June, 2020 - present

**Researcher, NKUA**  
Department of Port Management and Shipping

January, 2022 - June 2023

**Adjunct Lecturer (Academic Scholar), AUEB**  
Data Mining and Science undergraduate course

March, 2022 - September 2022

**Senior Researcher, CLMS**  
EU programs R&D

September, 2020 - March 2022

**Postdoctoral Researcher, École Polytechnique**  
Research, supervision

March, 2019 - June 2020

**Research Engineer, École Polytechnique**  
Data Mining, Machine Learning, Data Visualization

July, 2013 - September, 2014

## EDUCATION

**École Polytechnique**, Palaiseau, France ([DaSciM team](#))

Ph.D. Candidate, October 2015 - February 2019

- Topic: “[Novel Representations, Regularization and Distances for Text Classification](#)”
- Advisors: Prof. Michalis Vazirgiannis & Prof. Guillaume Wisniewski

**École Normale Supérieure Paris-Saclay**, Paris, France

M.Sc., Math, Computer Vision and Machine Learning ([MVA](#)) 2014-2015

Specialization: Graph & Text Mining

**Athens University of Economics and Business**, Athens, Greece

B.Sc., Computer Science, May 2013

Specialization: Data Mining & Web Crawling

## HONORS AND GRANTS

**Google Education 2024**

Granted access to Google Cloud and Gemini credits for research

**OpenAI Researcher Access Program, 2024**

Granted access to GPT-4 credits for research in LLM reasoning

**École Polytechnique Jeune Post-doc Fellowship, March-May 2019**  
Awarded a 3-month post-doc research grant

**École Polytechnique Ph.D. Fellowship, 2015**  
Awarded a Ph.D. research grant for 2015-2018

PUBLICATIONS

1. [A Greek Government Decisions Dataset for Public-Sector Analysis and Insight](#)  
G. Antoniou, G. Filandrianos, A. Vlachos, G. Stamou, L. Kollimenos, K. Skianis, M. Vazirgiannis  
**arxiv 2025**
2. [On the Lipschitz Continuity of Set Aggregation Functions and Neural Networks for Sets](#)  
G. Nikolentzos, K. Skianis  
**arxiv 2025**
3. [KGRAG-Ex: Explainable Retrieval-Augmented Generation with Knowledge Graph-based Perturbations](#)  
G. Balanos, E. Chasanis, K. Skianis, E. Pitoura  
**IJCKG 2025** (Conference)
4. [Severity Prediction in Mental Health: LLM-based Creation, Analysis, Evaluation of a Novel Multilingual Dataset](#)  
K. Skianis, J. Pavlopoulos, AS Doğruöz  
**arxiv 2024**
5. [Graph Reasoning with Large Language Models via Pseudo-code Prompting](#)  
K. Skianis, G. Nikolentzos, M. Vazirgiannis  
**arxiv 2024**
6. [Leveraging LLMs for Translating and Classifying Mental Health Data](#)  
K. Skianis, AS Doğruöz, J. Pavlopoulos  
**MRL, EMNLP 2024** (Worskhop)
7. [On the Trade-off between Over-smoothing and Over-squashing in Deep Graph Neural Networks](#)  
J. Giraldo, K. Skianis, T. Bouwmans, F. Malliaros  
**CIKM 2023** (Conference)
8. [Predicting COVID-19 positivity and hospitalization with multi-scale graph neural networks](#)  
K. Skianis, G. Nikolentzos, B. Gallix, R. Thiebaut, G. Exarchakis  
**Nature Scientific Reports 2023** (Journal)
9. [Digital Twin for Automated Industrial Optimization: Intelligent Machine Selection via Process Modelling](#)  
K. Skianis, A. Giannopoulos, A. Kalafatelis, P. Trakadas  
**IAICT 2023** (Conference)
10. [SWIRL: Statistical downscaling for Wind Pattern Reconstruction using Machine Learning](#)  
K. Skianis, A. Giannopoulos, S. Spantideas, M. Hatzaki, A. Karditsa, P. Trakadas  
**CEST 2023** (Conference)
11. [Towards Fine-Dining Recipe Generation with Generative Pre-trained Transformers](#)  
K. Katserelis, K. Skianis  
**arxiv 2022**
12. [Moderate COVID-19: Clinical Trajectories and Predictors of Progression and Outcomes](#)  
A. G. Pappas, A. Panagopoulos, A. Rodopoulou, M. Alexandrou, A. Chaliasou, K. Skianis, E. Kranidioti, E. Chaini, I. Papanikolaou, I. Kalomenidis  
**Journal of Personalized Medicine 2022** (Journal)
13. [Evaluation of Machine Translation Methods applied to Medical Terminologies](#)  
K. Skianis, F. Desgripes, Y. Briand  
**LOUHI, EMNLP 2020** (Workshop)

14. [Boosting Tricks for Word Mover's Distance](#)  
K. Skianis, F .D. Malliaros, N. Tziortziotis, M. Vazirgiannis  
**ICANN 2020** (Conference)
15. [Rep the Set: Neural Networks for Learning Set Representations](#)  
K. Skianis, G. Nikolentzos, S.Limnios, M. Vazirgiannis  
**AISTATS 2020** (Conference)
16. [GraKel: Graph Kernels in Python](#)  
G. Nikolentzos, I. Siglidis, S. Limnios, C. Giatsidis, K. Skianis, M. Vazirgianis  
**JMLR 2020** (Journal)
17. [Evaluation of Greek Word Embeddings](#)  
S.Outsios, C. Karatsalos, K. Skianis, M. Vazirgiannis  
**LREC 2020** (Conference)
18. [Scientometrics for Success and Influence in the Microsoft Academic Graph](#)  
G. Panagopoulos, C. Xypolopoulos, K. Skianis, C. Giatsidis, J. Tang, M. Vazirgiannis  
**Complex Networks 2019** (Conference)
19. [Word Embeddings from Large-scale Greek Web Content](#)  
S.Outsios, K. Skianis, P. Meladianos, C. Xypolopoulos, M. Vazirgianis  
**arXiv 2018**
20. [Orthogonal Matching Pursuit for Text Classification](#)  
K. Skianis, N. Tziortziotis, M. Vazirgianis  
**WNUT, EMNLP 2018, Brussels, Belgium** (Workshop)
21. [Fusing Document, Collection and Label Graph-based Representations with Word Embeddings for Text Classification \(Best Paper Award\)](#)  
K. Skianis, F. Malliaros, M. Vazirgiannis  
**TextGraphs, NAACL 2018, New Orleans, USA** (Workshop)
22. [Kernel Graph Convolutional Neural Networks](#)  
G. Nikolentzos, P. Meladianos, A. J.-P. Tixier, K. Skianis, M. Vazirgiannis  
**ICANN 2018, Rhodes, Greece** (Conference)
23. [Data Management for the World Wealth & Income Database](#)  
K. Skianis, M. Vazirgiannis, L. Chancel, T. Piketty et. al.  
**ParisBD 2017, Paris, France** (Poster)
24. [SpreadViz: Analytics and Visualization of Spreading Processes in Social Networks](#)  
K. Skianis, MEG. Rossi, F. D. Malliaros, M. Vazirgiannis  
**ICDM 2016, Barcelona, Spain** (Demo)
25. [Regularizing Text Categorization with Clusters of Words](#)  
K. Skianis, F. Rousseau, M. Vazirgiannis  
**EMNLP 2016, Austin, USA** (Conference)
26. [GoWvis: a web application for Graph-of-Words-based text visualization and summarization](#)  
A. J.-P. Tixier, K. Skianis, M. Vazirgiannis  
**ACL 2016, Berlin, Germany** (Demo)
27. [Graph-Based Term Weighting for Text Categorization](#)  
F. Malliaros, K. Skianis  
**Someris, ASONAM 2015, Paris, France** (Workshop)

## STARTUPS

### PrimeHost (<https://primehost.ai>):

- Automate guest conversation with AI. Our solution utilizes state-of-the-art NLP methods for providing either fully automated responses to guests or draft responses to hosts or listing managers.
- Started October 2023
- Awarded €170.000 in Azure credits from Microsoft
- More than 3000 listings in the platform

### BLUAI (<https://bluai.github.io>):

- Projects with Agence Numerique de Sante:
  - Machine Translation of Medical Terminologies,
  - Ontology Matching,
  - Medical Knowledge Extraction via Word Embeddings
- Elyas Conseil: identifying budget from project reports. The goal of this project was to try to extract the class or category of budget regarding a specific project report.

## EUROPEAN PROJECTS

- **Pharos (2025–present):** Participation in the [Pharos](#) initiative (Language & Culture), focusing on the design and development of a large-scale Greek large language model (LLM). Contributions include data curation and cleaning for Greek corpora, evaluation benchmark design, and fine-tuning and instruction-tuning strategies to improve domain adaptation in Greek.
- **ANS (2019–present):** Participation in a research project with the [Agence Numérique de la Santé \(ANS\)](#), Paris, France, a French public organization, focusing on machine translation of medical texts and clinical terminologies. The project is funded by the French state (budget: €150,000) and conducted through the BLUAI company. Role: research engineer, programmer, and researcher developing novel machine translation methods.
- **ICOS (2023): Towards a Functional Continuum Operating System**, European research project funded by the European Union under the HORIZON research and innovation programme (Grant Agreement No. 101070177). Collaborating researcher at the Department of Ports and Shipping Management, National and Kapodistrian University of Athens (NKUA), within the research group of Associate Professor P. Trakadas.
- **Change2Twin (2022): Bringing Digital Twins to Manufacturing SMEs**, European project funded by the European Union's Horizon 2020 Research and Innovation Programme (Grant Agreement No. 951956). Collaborating researcher at the Department of Ports and Shipping Management, NKUA, within the research group of Associate Professor P. Trakadas.
- **AdaptPorts (2022): Strategic Action for the Adaptation of Ports to Climate Change**, funded by the Green Fund under Priority Axis 3 “Research and Application – Physical Environment & Innovative Actions 2022”. Research contribution within the group of Associate Professor P. Trakadas.
- **DigiCirc (2021): Digital Circular Economy**, European project funded by the European Union's Horizon 2020 research and innovation programme (Grant Agreement No. 873468). Role: developer at CLMS.
- **Airbus (2014):** Industrial research project with Airbus on predicting aircraft *NO-GO* messages from operational logs. NO-GO messages render aircraft temporarily unavailable for flight. The study identified precursor log patterns that can serve as early indicators of future NO-GO events.

## SUPERVISION

- Ph.D. (2025-):
  - Markos-Tilemachos Mpazakas: Industrial Ph.D. with Natech
- Master theses (2025):
  - Marios Ellinidis: Explanation Consistency as a Signal for Faithfulness in LLMs
  - Panagiotis Kannas: Structure-Aware Tabular Question Answering with LLMs
  - Ioannis Mpouzas: Memory as Graph-Constrained Belief Vectors via Projection-Based Reasoning Under Structural Constraints
  - Ioanna Sakellariou: Investigating the Inverse Task of Medical Redefinition in LLMs
  - Christos Tzouvaras: Clarity Semeval

## REVIEWS

- 2026: WWW, ARR
- 2025: Area Chair @ARR (ACL, EMNLP), NeurIPS, ICLR
- 2023: ACL
- 2021: NAACL
- 2020: EMNLP
- 2019: NAACL, LLD @ICLR
- 2018: NIPS, WWW, EMNLP, ECML-PKDD
- 2017: AAAI, LLD @NIPS, EMNLP
- 2016: AAAI, WSDM, IC<sup>2</sup>S<sup>2</sup>

## TEACHING

- 2024: Linear Algebra (undergraduate)  
*Full teaching - Department of Computer Science & Engineering, UOI*
- 2022: Data Mining and Science (undergraduate)  
*Full teaching - Department of Informatics, AUEB*
- 2019: Executive training for companies: Lectures & labs on text mining and deep learning  
*Full teaching - DSSP, EXED*
- 2017: Learning for Text and Graph Data: Labs (master)  
*Master M2 @ Ecole Polytechnique*

## COMPETITIONS

<b>6th place, National Bank of Greece Race</b> Training greek word embedding from legal texts	<b>April 2019</b>
<b>2nd place, Fintech Crowdhackathon</b> Detecting fraud e-transactions based on deep learning	<b>April 2016</b>
<b>2nd place, DREEM challenge</b> (inclass Kaggle) Increasing the duration and quality of deep sleep	<b>January 2015</b>
<b>6th place, Data Mining Cup</b> Berlin, Germany	<b>July 2013</b>