Konstantinos Skianis

Assistant Professor @UOI, Founder @BLUAI-@PrimeHost

y3nk0.github.io, bluai.gr, primehost.ai

Google Scholar: scholar.google.com/citations?user=hG2ozuEAAAAJ

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

Professional Experience Assistant Professor, University of Ioannina Department of Computer Science & Engineering March, 2024 - present

Founder, R&D, PrimeHost

Automate guest conversations with AI

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 Professor (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, 'Ecole Polytechnique

Research, supervision

March, 2019 - June 2020

Research Engineer, École Polytechnique & Airbus

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 Superieure 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 Awards

École Polytechnique Jeune Post-doc Fellowship, March-May 2019

Awarded a 3-month post-doc research grant

École Polytechnique Ph.D. Fellowship, 2015

Awarded the Ph.D. research grant for 2015-2018

PUBLICATIONS

- On the Trade-off between Over-smoothing and Over-squashing in Deep Graph Neural Networks J. Giraldo, K. Skianis, A. Giannopoulos, T. Bouwmans, F. Malliaros CIKM 2023 (Conference)
- 2. Digital Twin for Automated Industrial Optimization: Intelligent Machine Selection via Process Modelling

K. Skianis, A. Giannopoulos, A. Kalafatelis, P. Trakadas IAICT 2023 (Conference)

- 3. 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)
- 4. 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 2022 (Journal)
- 5. Towards Fine-Dining Recipe Generation with Generative Pre-trained Transformers K. Katserelis, K. Skianis arxiv 2022 (Journal)
- 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)
- Evaluation of Machine Translation Methods applied to Medical Terminologies K. Skianis, F. Desgrippes, Y. Briand LOUHI, EMNLP 2020 (Workshop)
- 8. Boosting Tricks for Word Mover's Distance K. Skianis, F.D. Malliaros, N. Tziortziotis, M. Vazirgiannis ICANN 2020 (Conference)
- 9. Rep the Set: Neural Networks for Learning Set Representations K. Skianis, G. Nikolentzos, S.Limnios, M. Vazirgiannis AISTATS 2020 (Conference)
- GraKel: Graph Kernels in Python
 G. Nikolentzos, I. Siglidis, S. Limnios, C. Giatsidis, K. Skianis, M. Vazirgianis
 JMLR 2020 (Journal)
- Evaluation of Greek Word Embeddings
 S.Outsios, C. Karatsalos, K. Skianis, M. Vazirgiannis
 LREC 2020 (Conference)
- 12. 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)
- Word Embeddings from Large-scale Greek Web Content S.Outsios, K. Skianis, P. Meladianos, C. Xypolopoulos, M. Vazirgiannis arXiv 2018
- Orthogonal Matching Pursuit for Text Classification
 K. Skianis, N. Tziortziotis, M. Vazirgianis
 WNUT, EMNLP 2018, Brussels, Belgium (Workshop)
- 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)

Kernel Graph Convolutional Neural Networks
 Nikolentzos, P. Meladianos, A. J.-P. Tixier, K. Skianis, M. Vazirgiannis

ICANN 2018, Rhodes, Greece (Conference)

17. Data Management for the World Wealth & Income Database

K. Skianis, M. Vazirgiannis, L. Chancel, T. Piketty et. al.

ParisBD 2017, Paris, France (Poster)

18. SpreadViz: Analytics and Visualization of Spreading Processes in Social Networks

K. Skianis, MEG. Rossi, F. D. Malliaros, M. Vazirgiannis

ICDM 2016, Barcelona, Spain (Demo)

19. Regularizing Text Categorization with Clusters of Words

K. Skianis, F. Rousseau, M. Vazirgiannis

EMNLP 2016, Austin, USA (Conference)

20. 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)

21. Graph-Based Term Weighting for Text Categorization

F. Malliaros, K. Skianis

Someris, ASONAM 2015, Paris, France (Workshop)

Reviews

- 2023: ACL
- 2021: NAACL
- 2020: EMNLP
- 2019: NAACL, LLD @ICLR
- 2018: NIPS, WWW, EMNLP, ECML-PKDD
- 2017: AAAI, LLD @NIPS, EMNLP
- 2016: AAAI, WSDM, IC²S²

Teaching

- \bullet 2022: Teaching the Data Mining and Science undergraduate course 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 with Python Labs Licence, Master M2 @ Ecole Polytechnique

Competitions

6th place, National Bank of Greece Race

April 2019

Training greek word embedding from legal texts.

${\bf 2nd~place,~Fintech~Crowdhack athon}$

April 2016

Detecting fraud e-transactions based on deep learning.

2nd place, DREEM challenge (inclass Kaggle)

January 2015

DREEM introduces a way to increase the duration and quality of deep sleep.

6th place, Data Mining Cup

July 2013

Berlin, Germany

 $\label{eq:Technical Skills} Technical Skills \qquad Coding \mid Python, Java, C, C++ SQL, Matlab, D3js, I \!\!\!\!/ T_E X$

Systems | Kubernetes, Elasticsearch

Tools Keras, Tensorflow, PyTorch, Spark, Hadoop

Additional Languages Greek - Native

Information English - Fluent

German - Good French - Good