Michail Chatzianastasis

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Education

École Polytechnique
Paris, France

PHD IN COMPUTER SCIENCE
Nov. 2021 - Present

- Machine Learning on graph-structured data.
- Graph Neural Networks and Neural Architecture Search
- *Advisor: Prof Michalis Vazirgiannis*

National Technical University of Athens
Athens, Greece

MENG IN ELECTRICAL AND COMPUTER ENGINEERING (ECE)
Sep. 2015 - Nov. 2020

- 5-year joint degree, 300 ECTS, GPA: 8.24/10
- *Major*: Computer Science
- *Thesis*: Generating Neural Network Architectures with Graph Variational Autoencoder. *Grade:10/10*

3rd General Lyceum of Rhodes
Rhodes, Greece

NATIONWIDE UNIVERSITY ENTRANCE EXAMS SCORE: 19,443/20,000 (TOP 1% NATIONWIDE) .
Sep. 2012 - Jun. 2015

Work Experience

Simons Foundation, Flatiron Institute
New York, United States

DEEP LEARNING RESEARCHER INTERNSHIP
June. 2022 - September. 2022

- Research in Graph Neural Networks for biomedical data.
- Graph Neural Networks for cancer risk prediction.
- *Advisor*: Dr. Frank Zijun Zhang

Laboratory of Algebraic and Geometric Algorithms ΕρΓΑ
Athens,Greece

MACHINE LEARNING ENGINEER
Sep. 2020 - May. 2021

- Develop Deep Neural Networks for time-series prediction.
- Provide short-term wind energy predictions for wind farms using machine learning.
- *Advisor*: Prof. Ioannis Emiris

Data Science and Mining (DaSciM) team of École Polytechnique
Remote

UNDERGRADUATE RESEARCHER
Apr. 2020 - Nov. 2020

- Pursuing my undergraduate thesis in collaboration with DaSciM team.
- Developed a novel method for neural architecture search using operation embeddings.
- *Advisor*: Prof. Michalis Vazirgiannis

NCSR Democritos
Athens, Greece

MACHINE LEARNING ENGINEER
Sep. 2019 - Jan. 2020

- Analyzed language samples using natural language processing techniques to automatically detect early indicators of Alzheimer's, using scikit-learn and PyTorch.
- Developed and designed an android application to show user's grammatical and lexical score in several cognitive tasks using Java.

Google Summer Of Code
Remote

SOFTWARE ENGINEER (SUMMER INTERNSHIP)
Apr. 2019 - Sep. 2019

- Developed a fully functional open source RESTful API that supports the whole lifecycle of a thesis, eliminating the time-consuming procedures in universities. [Repository]
- The project is currently maintained by Harokopio University.
- *Advisor*: Prof. Iraklis Varlamis

Selected Publications

Graph Ordering Attention Networks

Michail Chatzianastasis, Johannes Lutzeyer, George Dasoulas, Michalis Vazirgiannis

Accepted at AAAI 2023 (19.6%) [link]

Weisfeiler and Leman go Hyperbolic: Learning Distance Preserving Graph Representations

Giannis Nikolentzos, Michail Chatzianastasis, Michalis Vazirgiannis

Accepted at AISTATS 2023 (29%) [link]

Explainable Multilayer Graph Neural Network for Cancer Gene Prediction
Michail Chatzianastasis, Michalis Vazirgiannis, Zijun Zhang.
Accepted at Bioinformatics, 2023 [link]

Neural Architecture Search with Multimodal Fusion Methods for Diagnosing Dementia
Michail Chatzianastasis, Loukas Ilias, Dimitris Askounis, Michalis Vazirgiannis
Accepted at ICASSP 2023 [link]

Mass Enhanced Node Embeddings for Drug Repurposing
Michail Chatzianastasis, Giannis Nikolentzos, Michalis Vazirgiannis
Accepted at ICML 2022 Workshop on Computational Biology and at EETN Conference on Artificial Intelligence (SETN 2022) [link]

Graph-based Neural Architecture Search with Operation Embeddings
Michail Chatzianastasis, George Dasoulas, Georgios Siolas, Michalis Vazirgiannis
Published at ICCV 2021 Workshop on Neural Architectures: Past, Present and Future, 2021 [link]

Teaching Experience

MVA ENS Paris-Saclay *Paris, France*
Graph Machine Learning *2022*
Teaching the Graph Neural Networks Lab.

INSEEC Business School *Paris, France*
Big Data Management *Feb. 2022 - June. 2022*
• Designed and taught the course on Big Data Management.

École Polytechnique *Paris, France*
Data Science Starter Program *Nov. 2021 - Dec. 2021*
• Lab assistant in the course Big Data Course at Polytechnic Executive Education Program.

Honors & Awards

2023 **École Polytechnique Engineering for Health (E4H) Conference Award (2500€)**
2022 **Thomaidio Award** for student scientific publication from National Technical University of Athens
2015-2020 **Five years Scholarship** by the Rhodes Scholarship Foundation for my performance in university.
2016 **Scholarship** by Eurobank and Greek State Scholarship Foundation for obtaining the highest grade in the perfecture, in university entrance exams.
2018 **Scholarship** by Intrasoft International for their educational program in web development

Reviewing

Neural Information Processing Systems (NeurIPS) (11 papers), International Conference on Artificial Intelligence and Statistics (AISTATS) (4 papers), International Conference on Learning Representations (ICLR) (4 papers), International Conference on Machine Learning (ICML) (8 papers), Computer Communications Elsevier (1 paper).

Skills

Machine Learning	PyTorch,TensorFlow Keras, Scikit-Learn
Web-Development	Node.js Express, java, Javascript , Angular, HTML5
Scientific Programming and Data Analysis	Python, C++, MATLAB, NumPy, Matplotlib , LaTeX
Databases	MySQL,MongoDB
Languages	Greek, English, German

Extracurricular Activity

Google Hash Code 2018 *Athens,Greece*
Get a top 10 score in Greece, by implementing a routing algorithm for self-driving car. *2018*

Sensors Coding Hackathon 2018 by Advantage Austria and IEEE Ntua Student Branch *Athens,Greece*
Implemented a forest fire system detection by taking data from fire sensors and camera and monitor them from a web site. Technologies used:Javascript, Node-RED *2018*