

# Michail Chatzianastasis

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## Education

### École Polytechnique

PHD IN COMPUTER SCIENCE

Paris, France

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

MENG IN ELECTRICAL AND COMPUTER ENGINEERING (ECE)

Athens, Greece

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

NATIONWIDE UNIVERSITY ENTRANCE EXAMS SCORE: 19,443/20,000 (TOP 1% NATIONWIDE) .

Rhodes, Greece

Sep. 2012 - Jun. 2015

## Work Experience

### Simons Foundation, Flatiron Institute

DEEP LEARNING RESEARCHER INTERNSHIP

New York, United States

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 EpΓA

MACHINE LEARNING ENGINEER

Athens, Greece

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

UNDERGRADUATE RESEARCHER

Remote

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

MACHINE LEARNING ENGINEER

Athens, Greece

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

SOFTWARE ENGINEER (SUMMER INTERNSHIP)

Remote

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 [link]

### Weisfeiler and Leman go Hyperbolic: Learning Distance Preserving Graph Representations

Giannis Nikolentzos, Michail Chatzianastasis, Michalis Vazirgiannis

Accepted at AISTATS 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

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### MVA ENS Paris-Saclay

GRAPH MACHINE LEARNING

Teaching the Graph Neural Networks Lab.

Paris, France

2022

### INSEEC Business School

BIG DATA MANAGEMENT

- Designed and taught the course on Big Data Management.

Paris, France

Feb. 2022 - June. 2022

### École Polytechnique

DATA SCIENCE STARTER PROGRAM

- Lab assistant in the course Big Data Course at Polytechnic Executive Education Program.

Paris, France

Nov. 2021 - Dec. 2021

## Honors & Awards

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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 prefecture, in university entrance exams.

2018 **Scholarship** by Intrisoft International for their educational program in web development

## Reviewing

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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

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

## Extracurricular Activity

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### Google Hash Code 2018

GET A TOP 10 SCORE IN GREECE, BY IMPLEMENTING A ROUTING ALGORITHM FOR SELF-DRIVING CAR.

Athens, Greece

2018

### Sensors Coding Hackathon 2018 by Advantage Austria and IEEE Ntua Student Branch

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

Athens, Greece

2018