

MICHAEL CHATZIANASTASIS

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EDUCATION

École Polytechnique, Paris, France Nov. 2021 - Present

Ph.D. Computer Science.

- Advisor: **Pr. Michalis Vazirgiannis**.
- Machine Learning on **Graph-Structured data** with applications in **Biomedicine**.

National Technical University of Athens, Greece Sept. 2015 - Nov. 2020

Electrical & Computer Engineering (5-year joint degree).

- Overall GPA: 8.24/10. Major: **Computer Science**.
- Thesis: **Generating Neural Network Architectures with Graph Variational Autoencoder**. Grade: 10/10.
- Nationwide University Entrance Exams Score: **19,443/20,000 (top 1% Nationwide)**.

EXPERIENCE

Simons Foundation, Flatiron Institute New York, USA

Deep Learning Research Internship

June 2022 - Sept. 2022

- Research in Graph Neural Networks for cancer gene prediction.
- Advisor: Prof. Zijun Frank Zhang.

Laboratory of Algebraic and Geometric Algorithms ErGA Athens, Greece

Machine Learning Engineer

Sept. 2020 - May. 2021

- Developed Deep Neural Networks for short-term wind energy prediction.
- Advisor: Prof. Ioannis Emiris.

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

Undergraduate Researcher

Apr. 2020 - Nov. 2020

- Undergraduate thesis in collaboration with DaSciM team, on Neural Architecture Search and Graph Autoencoders.

NCSR Democritos Athens, Greece

Machine Learning Engineer

Sept. 2019 - Jan. 2020

- Developed NLP models to detect early indicators of Alzheimer's, using scikit-learn and PyTorch.

Google Summer of Code Remote

Software Engineer

Apr. 2019 - Sep. 2020

- Developed a fully functional open source RESTful API that supports the whole lifecycle of a thesis, eliminating the time-consuming procedures in universities.
- Advisor: Prof. Iraklis Varlamis.

SELECTED PUBLICATIONS

1. Hadi Abdine, **Michail Chatzianastasis**, Costas Bouyioukos, Michalis Vazirgiannis. [AAAI 2024]: “Prot2Text: Multimodal Protein’s Function Generation with GNNs and Transformers” [\[link\]](#)
2. **Michail Chatzianastasis**, Johannes Lutzeyer, George Dasoulas, Michalis Vazirgiannis. [AAAI 2023]: “Graph Ordering Attention Networks” [\[link\]](#)
3. Giannis Nikolentzos, **Michail Chatzianastasis**, Michalis Vazirgiannis. [AISTATS 2023]: “Weisfeiler and Leman go Hyperbolic: Learning Distance Preserving Graph Representations.” [\[link\]](#)
4. **Michail Chatzianastasis**, Michalis Vazirgiannis, Zijun Zhang. [OUP Bioinformatics, 2023]: “Explainable Multilayer Graph Neural Network for Cancer Gene Prediction.” [\[link\]](#)
5. **Michail Chatzianastasis**, Loukas Ilias, Dimitris Askounis, Michalis Vazirgiannis. [ICASSP 2023]: “Neural Architecture Search with Multimodal Fusion Methods for Diagnosing Dementia.” [\[link\]](#)
6. **Michail Chatzianastasis**, Giannis Nikolentzos, Michalis Vazirgiannis. [ICANN 2023]: “Supervised Attention Using Homophily in Graph Neural Networks.” [\[link\]](#)
7. **Michail Chatzianastasis**, Giannis Nikolentzos, Michalis Vazirgiannis. [ICML 2022 Workshop on Computational Biology and SETN 2022]: “Mass Enhanced Node Embeddings for Drug Repurposing.” [\[link\]](#)
8. **Michail Chatzianastasis**, George Dasoulas, Georgios Siolas, Michalis Vazirgiannis. [ICCV 2021 Workshop on Neural Architectures.]: “Graph-based Neural Architecture Search with Operation Embeddings.” [\[link\]](#)

HONORS & AWARDS

- École Polytechnique Engineering for Health (E4H) Conference Award (2500€) (2023).
- Thomaidio Award - Acknowledgment for undergraduate scientific publication (2022).

- **Five-Year Scholarship** granted by the Rhodes Scholarship Foundation in recognition of academic excellence (2015-2020).
- **Scholarship** awarded by **Eurobank** and the **Greek State Scholarship Foundation** for achieving the highest score in my prefecture in Nationwide university entrance exams (2016).
- **Scholarship** received from **Intrasoft International** for my participation in their educational program focused on web development (2018).

TALKS

- **NeurIPS DGM4H Workshop**: Prot2Text: Multimodal Protein's Function Generation with GNNs and Transformers
- **Log Conference Paris Meetup 2023**: Prot2Text: Multimodal Protein's Function Generation with GNNs and Transformers
- **Complex Network Analysis (CNA)** discussion group: Graph Ordering Attention Networks
- **LoGaG: Learning on Graphs and Geometry Reading Group**: Graph Ordering Attention Networks

TEACHING

- **Advanced Learning for Text and Graph Data (ALTeGraD)**, École Polytechnique, Paris, France.
- **Big Data Management** INSEEC Business School, Paris, France. Designed and taught the course on Big Data Management. Feb. 2022 - June. 2022
- **Data Science Starter Program** École Polytechnique, Paris, France. Lab assistant in the course Big Data Course at Polytechnic Executive Education Program. Nov. 2021 - Dec. 2021
- **Data Mining - SPEIT program, Shanghai Jiaotong University**. Apr. 2023

SERVICE

- **Program Committee** at International Conference on Artificial Neural Networks (ICANN 2023).
- **Reviewing**:
 - Conference on Neural Information Processing Systems (NeurIPS) 2022,2023.
 - International Conference on Learning Representations (ICLR) 2023,2024.
 - International Conference on Machine Learning (ICML) 2022,2023.
 - International Conference on Artificial Intelligence and Statistics (AISTATS) 2023.
 - International Conference on Acoustics, Speech, & Signal Processing (ICASSP) 2022,2023.
 - International Conference on Artificial Neural Networks (ICANN) 2023.
 - Computer Communications Elsevier 2023.

SKILLS

- **Machine Learning**: PyTorch, TensorFlow Keras, JAX, Scikit-Learn, PyTorch Geometric.
- **Web-Development**: Node.js Express, Javascript, Angular.
- **Programming**: Python, C++, Java, MATLAB, NumPy, Matplotlib.
- **Languages**: Greek (Native), English (Proficient), German (B1), French (A2).