

EDUCATION

Ph.D. in Machine Learning

Nov. 2024 – Present

National and Kapodistrian University of Athens, Department of Informatics and Telecommunications

Ph.D. degree offers me specialized knowledge in theory based Machine Learning.

- Supervisor: Christos Tzamos.
- Research interests: Transformers, Neural Networks, Optimization, Combinatorials.
- Published at: NeurIPS (1), ICLR (1, under review).

M.Sc. in Statistical Science

Oct. 2020 – Sep. 2021

University of Oxford, Department of Statistics, Lincoln College

Master degree offered me broad high-level training in Statistics and Machine Learning.

- Courses: Statistical Machine Learning, Algorithmic Foundations of Learning, Advanced Simulation Methods, Computational Statistics, Applied Statistics, Bayes Methods, Foundations of Statistical Inference, Statistical Programming.
- Thesis: *Authorship Attribution in Ancient Greek Texts*, co-supervised by Yannis Assael, George Deligiannidis, and Thea Sommerschild – Grade: **61%**.
- Grade: **Merit**.

B.Sc. in Mathematics

Sep. 2016 – Aug. 2020

University of Patras, Department of Mathematics

Undergraduate degree offered me broad knowledge in a wide range of Mathematics and motivated me to focus on Statistics and Computer Science.

- Division of Statistics, Probability Theory & Operational Research.
- Thesis: *Mathematical Techniques in Data Science and Machine Learning*, under the supervision of Michael N. Vrahatis – Grade: **10.00/10.00**.
- Grade: **8.90/10.00** (Distinction), equivalent to first-class honours (**top 1%**).

Summer School in Economic Networks

Jul. 2021

University of Oxford

Studied quantitative methods, applications, and impacts of network theory within Economics.

Summer School of Nuclear and Particle Physics

Jul. 2020

National Centre for Scientific Research Demokritos

Worked on topics of Computer Science, Machine Learning, Nuclear, and Particle Physics – CERN.

Summer School in Python

Jul. 2019

University of Patras, Aristotle University of Thessaloniki, Ionian University

Intensive summer school on advanced themes of Data Analysis and Machine Learning, using Python.

EXPERIENCE

Ph.D. Researcher

Jul. 2024 – Present

Archimedes, Athena Research Center

Conducting research on theory-based Machine Learning models through Optimization and Statistics under the supervision of Christos Tzamos.

Research Assistant

Apr. 2024 – Jun. 2024

Technical University of Denmark, Department of Applied Mathematics and Computer Science

Explored Deep Learning theory via Riemannian geometry under the supervision of Georgios Arvanitidis.

Research Assistant

Apr. 2023 – Dec. 2023

Czech Technical University in Prague, Faculty of Electrical Engineering

Focused on the Mini-batch Stochastic Subgradient Projection method under the supervision of Vyacheslav Kungurtsev, and Jakub Mareček.

Research Assistant

Apr. 2022 – Apr. 2024

Athena Research Center, Department of Institute for the Management of Information Systems

Researched the interface of NLP, Privacy, and Security tasks using LLMs under the supervision of Constantinos Patsakis.

Research Assistant

Oct. 2021 – Mar. 2022

Max Planck Institute for Mathematics in the Sciences

Working on the authorship attribution task with a focus on Plutarch's texts using LLMs under the supervision of Ivan P. Yamshchikov, and Jürgen Jost.

PUBLICATIONS

C: Conference J: Journal †: equal contribution.

- C_3 *A Derandomization Framework for Structure Discovery: Applications in Neural Networks and Beyond*. Nikos Tsikouras, Yorgos Pantis, Ioannis Mitliagkas, Christos Tzamos. ICLR 2026. [Under Review]
- C_2^\dagger *Teaching Transformers to Solve Combinatorial Problems through Efficient Trial & Error*. Panagiotis Giannoulis, Yorgos Pantis, Christos Tzamos. NeurIPS 2025. [Paper]
- J_1 *The Anatomy of Deception: Measuring Technical and Human Factors of a Large-scale Phishing Campaign*. Anargyros Chrysanthou, Yorgos Pantis, Constantinos Patsakis. Journal Computers & Security, 2024. [Paper]
- C_1 *BERT in Plutarch's Shadows*. Ivan P. Yamshchikov, Alexey Tikhonov, Yorgos Pantis, Charlotte Schubert and Jürgen Jost. EMNLP 2022. [Paper]

HONORS & AWARDS**4-year Full Scholarship**

Jul. 2024 – Present

Archimedes, Athena Research Center

In support of my doctoral studies due to my background.

Research Infrastructure Grant

Dec. 2024 – Present

GRNET – Greek Research & Technology Network

In support of my doctoral research, computational resources were provided, including AWS credits and high performance computing systems.

Full Annual Scholarship

Oct. 2020 – Aug. 2021

Bodossaki Foundation

In support of my master's studies due to my bachelor performance.

Covid-19 Assistance Fund

Jun. 2021

University of Oxford, Lincoln College

In support of my master's studies.

Vivian Green Student Assistance Scholarship

Feb. 2021

University of Oxford, Lincoln College

In support of my master's studies.

4-year Annual Scholarship

Every Sept. 2016 – 2020

Greek State Scholarships Foundation

In support of my bachelor studies due to my bachelor performance.

4-year Consistently in the Top 1%

Every Sept. 2016 – 2020

University of Patras, Department of Mathematics

Classified in the top-tier of my class for the duration of my bachelor studies.

Ranked Second Among Admitted Students

Sept. 2016

University of Patras, Department of Mathematics

Second place among accepted candidates for the bachelor's degree program.

TALKS & SERVICE

Talks

- HSBC – on Transformers reasoning *Sept. 2025*
- Archimedes, Athena Research Center – on Transformers reasoning *May 2025*

Reviewer

- NeurIPS 2025.
- ICLR 2026, 2025.
- ICML 2025.

Teaching Assistant

National and Kapodistrian University of Athens, Department of Informatics and Telecommunications

- *Computational Learning Theory* *Fall Semester 2025*
I contributed to the preparation of theoretical problem sets and coding examples, helping students understand foundational concepts in learning theory.
- *Artificial Intelligence II – Deep Learning for NLP* *Fall Semester 2025*
I assisted in developing lab materials focused on practical applications in the field, while also organizing and grading assignments.

Exam Proctor

Nov. 2024 – Present

- *National and Kapodistrian University of Athens, Department of Informatics and Telecommunications*
Served as an exam proctor each semester across various courses, effectively co-managing and monitoring classes to ensure smooth exam administration.

Volunteer

- *Archimedes, Athena Research Center* *Sept. 2025 – Present*
Member of the organizing committee for Greece's AI competition (PDTN), preparing students for the International AI Olympiad (IOAI) through coding and theory tutorials, as well as exams.
- *University of Oxford, Lincoln College* *Sept. 2022 – Present*
Mentor undergraduate and graduate students by providing guidance on their current studies, CV preparation, and applications for graduate programs or industry opportunities.
- *Library, University of Patras* *Sept. 2019 – Aug. 2020*
Edited digital documents and transcribed handwritten notes to support higher education students with disabilities, including blindness, dyslexia, and other learning challenges.
- *National Technical University of Athens* *Oct. 2019*
Engaged with the public to explain scientific concepts and advised high school students on selecting universities that align with their interests and goals.