# Yorgos Pantis

## 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).

**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 Sommerschield – 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*

*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** *Apr. 2022 – Apr. 2024*

*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** *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.

$C_2^\dagger$ *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.

## SERVICE

**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.

## TALKS

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