Nikolas Kougioulis

nkougioulis.com
Location: Thessaloniki, Greece
Open to relocation/ remote

Experience

Oct 2023 – Present
Research Engineer, *Foundation for Research & Technology Hellas*, Heraklion, Greece.

Contributed to ∼**300K eur** private funding for industrial AI research. Developed methods for Causal AI:

- Built *foundation models* for *causal discovery* on time-series data
- Designed algorithms for *causal digital twin simulation*, *root cause analysis*, and *counterfactual decision optimization*
- Achieved *target KPIs* (Precision, Recall > 0.9) on data cases
- Delivered production-ready pipeline under recurring executive reviews
- Technical results contributed to supporting successful **2.5M eur** EIC deep-tech funding award

Areas: ▪ Causal AI ▪ Deep Learning ▪ Machine Learning
Skills: ▪ Python ▪ PyTorch ▪ Pandas ▪ NumPy ▪ Scikit-learn ▪ Git ▪ Software Engineering

Sep 2022 – Jun 2025
Teaching Assistant, Department of Computer Science, *University of Crete*, Greece.

- **CS-487 Introduction to Artificial Intelligence** (Fall 2023,24) - Prof. Ioannis Tsamardinos; 4th year course.
- **CS-119 Linear Algebra** (Spring 2023,24,25) - Prof. Ioannis Tsamardinos; 1st year course.
- **CS-100 Introduction to Computer Science** (Fall 2022) - Assist. Prof. Polyvios Pratikakis; 1st year course.

Aug – Oct 2017
Data Analyst Intern, *Psychological Technologies Ltd*, London, United Kingdom.
Successfully extracted, analyzed and presented key wellbeing indicators from real data, collected using the Experience Sampling Method (ESM) via a proprietary mobile app.
Skills: ▪ Data analysis ▪ Data storytelling ▪ R

Education

Nov 2025
MSc in Computer Science & Engineering, *Department of Computer Science, University of Crete*, Greece.
Thesis: Large Causal Models for Temporal Causal Discovery
Advisor: Prof. Ioannis Tsamardinos
GPA: 9.50/10.00
Areas: ▪ Causal AI ▪ Machine Learning ▪ Deep Learning

Nov 2021   **BSc in Mathematics**, *Department of Mathematics, Aristotle University of Thessaloniki*, Greece.
Areas: ▪ Pure Mathematics ▪ Applied Mathematics

Military Service

Military obligations fulfilled.

Publications & Manuscripts

In preparation   **Large Causal Models for Temporal Causal Discovery** (in preparation)
<u>Nikolaos Kougioulis</u>, Nikolaos Gkorgkolis, MingXue Wang, Bora Caglayan, Andrea Tonon, Dario Simionato & Ioannis Tsamardinos.

arXiv preprint 2025   **Temporal Causal-based Simulation for Realistic Time-series Generation**
Nikolaos Gkorgkolis, <u>Nikolaos Kougioulis</u>*, MingXue Wang, Bora Caglayan, Andrea Tonon, Dario Simionato & Ioannis Tsamardinos (arXiv 2506.02084).

Skills

Languages   ▪ English (Proficient) ▪ French (Upper Intermediate) ▪ Greek (Native)
Prog.   Python (PyTorch, NumPy, Pandas, Scikit-learn), SQL, C
Tools   git, vim, Linux, Powerpoint

Awards & Distinctions

Jul 2019   **3rd Place Overall in Formula Student ATA 2019**.
Part of the arist.u.r.t.le team, represented Aristotle University of Thessaloniki in international competitions.

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* Authors contributed equally to this work.