

# Nikolas Kougioulis



[nkougioulis.com](https://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€** 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€** EIC Transition award on Causal AI for Optimal Decision Making.

**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

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## Military Service

**Military obligations fulfilled.**

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## Publications & Manuscripts

- arXiv preprint 2026 **Large Causal Models for Temporal Causal Discovery**  
Nikolaos Kougioulis, Nikolaos Gkorgkolis, MingXue Wang, Bora Caglayan, Dario Simionato, Andrea Tonon & Ioannis Tsamardinos (arXiv 2602.18662).
- arXiv preprint 2025 **Temporal Causal-based Simulation for Realistic Time-series Generation**  
Nikolaos Gkorgkolis, Nikolaos Kougioulis\*, MingXue Wang, Bora Caglayan, Andrea Tonon, Dario Simionato & Ioannis Tsamardinos (arXiv 2506.02084).

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## Skills

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

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## 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.

Last Updated: March 7, 2026

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\* Authors contributed equally to this work.