

Nikolaos Kougioulis



Nationality: Greek

Location: Thessaloniki, Greece

Education

Sep 2022 – 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

Nov 2021 **Ptychion (BSc) in Mathematics**, *Department of Mathematics, Aristotle University of Thessaloniki, Greece.*

Areas: ■ Pure Mathematics ■ Applied Mathematics

Military Service

Military obligations fulfilled.

Professional Experience

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

Conducting research under public (*HFRI*) and private funding (*Huawei Ireland Research Centre*). Core contributor in a ~300K Huawei-funded industrial project. Developed SOTA algorithms for causal discovery, root cause analysis and counterfactual reasoning. Implemented and tested proprietary software, successfully applied in real-world scenarios. Exceeded project milestones and acceptance criteria. Collaborated with international teams, delivered biweekly reports and presentations.

Research Areas: ■ causality ■ causal discovery ■ machine learning ■ deep learning

Skills: ■ Python ■ PyTorch ■ Pandas, NumPy, Scikit-learn ■ R&D ■ git ■ Software engineering ■ Algorithm design ■ Technical writing ■ Scripting

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

Publications & Manuscripts

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).

MSc **Large Causal Models for Temporal Causal Discovery**
Dissertation Nikolaos Kougioulis.

* Authors contributed equally to this work.

Teaching Assistanships

- Fall 2022 **CS-100 Introduction to Computer Science**, *University of Crete, Greece*.
Assist. Prof. Polyvios Pratikakis
First year undergraduate course, Department of Computer Science
- Spring 2023,24,25 **CS-119 Linear Algebra**, *University of Crete, Greece*.
Prof. Ioannis Tsamardinos
First year undergraduate course, Department of Computer Science
- Fall 2023,24 **CS-487 Introduction to Artificial Intelligence**, *University of Crete, Greece*.
Prof. Ioannis Tsamardinos
Final year undergraduate Course, Department of Computer Science

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.

Skills

- Languages ■ English (Proficient) ■ French (Upper Intermediate) ■ Greek (Native)
- Prog. Python, JavaScript, C, MySQL, \LaTeX
- Other git, vim, Linux, Powerpoint