

Nikitas Theodoropoulos

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EDUCATION

National Technical University of Athens (NTUA)

2015 - 2024

BSc & MSc in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)

Athens, Greece

- GPA: 8.83/10
- Final thesis project: Leveraging Synthetic Story Data for Sample-Efficient Language Pre-training (published in CoNLL-BabyLM 2024)

PUBLICATIONS

1. [Nikitas Theodoropoulos](#), Giorgos Filandrianos, Vassilis Lyberatos, Maria Lymperaïou, and Giorgos Stamou **BERTtime Stories: Investigating The Role of Synthetic Story Data in Language Pre-training**. In *The 2nd BabyLM Challenge at the 28th Conference on Computational Natural Language Learning (CoNLL)*. 2024. [ACL](#) [🔗](#)
2. Adish Singla and [Nikitas Theodoropoulos](#). **From {Solution Synthesis} to {Student Attempt} Synthesis for Block-Based Visual Programming Tasks**. In *Proceedings of the 15th International Conference on Educational Data Mining (EDM)*. 2022. [Arxiv](#) [🔗](#)

EXPERIENCE

Undergraduate Researcher at AILS NTUA

March 2024 - November 2024

Artificial Intelligence and Learning Systems Laboratory (AILS) at NTUA [🔗](#)

Athens, Greece

- Conducted research in NLP advised by Prof. Georgios Stamou
- Investigated language modeling with human-like training data constraints of at most 100 million words, applying low-resource data augmentation using sort stories
- Published peer-reviewed research at the 2nd BabyLM challenge at CoNLL 2024

Research Engineer at the department of Informatics at NKUA

September 2023 - April 2024

Software Centric & Autonomic Networking (SCAN) at the National Kapodistrian University of Athens (NKUA) [🔗](#)

Athens, Greece

- Conducted research on multi-agent reinforcement learning for minimizing carbon emissions and optimizing energy usage in next-generation computer networks
- Participated in writing industry and EU-funded research proposals

Visiting Scholar - Fellowship at MPI-SWS

February 2021 - July 2022

Machine Teaching group at MPI-SWS [🔗](#)

Saarbrücken, Germany

- Conducted research on AI for Programming Education, Program Synthesis and Reinforcement Learning, advised by Prof. Adish Singla
- Worked on identifying student misconceptions in block-based visual programming and generalizing them by synthesizing possible student attempts for novel tasks
- Presented peer-reviewed research at the 15th Conference on Educational Data Mining (EDM), 2022

Undergraduate Researcher at SLP NTUA

February 2020 - February 2021

Speech and Language Processing group (SLP) [🔗](#)

Athens, Greece

- Conducted research on NLP, advised by Prof. Alexandros Potamianos
- Worked on learning brain-derived (fMRI) word representations for brain-guided bilingual dictionary induction

Pre-doctoral Research School

August 3-9, 2020

The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS) [🔗](#)

Saarbrücken, Germany (virtually)

- Was selected for a one week summer school organized by Cornell University, the University of Maryland, and the Max Planck Institutes; learned about state-of-the-art research in computer science and prepared for graduate school

Teaching Assistant at NTUA

November 2017 - March 2019

School of Electrical & Computer Engineering at NTUA [🔗](#)

Athens, Greece

- Assisted in the national team preparation for the Balkan Olympiad of Informatics
- Tutored students for the lab sessions at university courses: Intro to Programming, Programming Techniques

ACHIEVEMENTS

IEEEExtreme 14.0 coding contest, 2nd place in Greece, 76th worldwide, competition out of ~3700 teams	2021
IEEEExtreme 13.0 coding contest, 2nd place in Greece, 148th worldwide, competition out of ~3200 teams	2020
Award by EFG Eurobank, distinction in the Greek Nationwide University Entrance Examination	2015

SKILLS

Technical skills: Python, Pytorch, Scikit-Learn, NumPy, Pandas, Matplotlib, C, C++, Rust, LATEX, Unix/Linux, Bash, Tensorflow, Django, JS, Haskell, SQL, MatLab, Assembly

Languages: Greek (native), English (C2 - proficient), French (conversational), German (basic)