Nikitas Theodoropoulos

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EDUCATION

National Technical University of Athens (NTUA)   *Sep 2015 - Nov 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.   <u>Nikitas Theodoropoulos</u>, Giorgos Filandrianos, Vassilis Lyberatos, Maria Lymperaiou, 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 (CoNNL)*. 2024. ACL ↗

2.   Adish Singla and <u>Nikitas Theodoropoulos</u>. **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   *Mar 2024 - Nov 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 CoNNL 2024

Research Engineer at the department of Informatics at NKUA   *Sep 2023 - Apr 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   *Feb 2021 - Jul 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   *Feb 2020 - Feb 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   *Aug 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   *Nov 2017 - Mar 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

IEEEXtreme 14.0 coding contest, 2nd place in Greece, 76th worldwide, competition out of ~3700 teams   *2021*

IEEEXtreme 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)