Zacharias Iosif Sifakis

Madison, Wisconsin, USA • +(1)6082177732• zsifakis@wisc.edu

EDUCATION

University of Wisconsin-Madison (UW-Madison), Madison, WI   08/2023 - present
- PhD in Electrical and Computer Engineering
  - Grade: 4.0/4.0
  - Advisor: Prof. Dimitris Papailiopoulos
  - Relevant Coursework: Machine Learning, Advanced Natural Language Processing, Foundational Models & Future in Machine Learning, Theoretical Foundations in Large-Scale Machine Learning, Probability & Information Theory in Machine Learning, Computer Vision

Technical University of Crete (TUC), Chania, Greece   09/2017 -10/2022
- BSc & MSc in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)
  - Grade: 9.37 /10 ("Distinction") *(graduated 1st in my class)*
  - Relevant Coursework: Introduction to Probabilistic Graphical Models and Inference Algorithms, Statistical Modeling and Pattern Recognition, Linear Algebra, Statistical Signal Processing for Telecommunications, Machine Vision, Stochastic Processes and Time Series Analysis, Information Theory and Coding, Number Theory and Cryptography, Computer Networks II
  - Thesis: *"Asynchronous Inference for Security Applications" (Grade 10/10)*

1st General High School of Heraklion - Kapetanakeion, Grade: 19.7/20 (1st among graduate class)   06/2016

RESEARCH EXPERIENCE

Research Assistant, MLOpt Research Group, University of Wisconsin-Madison (UW-Madison)   08/2023 - present
- Currently working on Large Language Models and Machine Learning.

Undergraduate Research Assistant, Telecommunication Systems Research Institute (TSI), TUC   07/2021 - 10/2022
- Developed an algorithmic framework for distributed and asynchronous iterative algorithms.
- Implement a human presence detection security application using MATLAB.

Lab & Research Intern, Signal Processing Lab (SPL), FORTH-ICS, Heraklion, Greece   07/2020 - 08/2020
- Carried out research in single-image depth prediction and estimation algorithms utilizing 3D microscope images of a cow model.
- Performed video depth estimation using real-time footage shot from handheld mobile phone camera.

TEACHING EXPERIENCE

Introduction to Artificial Neural Networks (ECE/CS/ME 539)   08/2024 - 01/2025
- Explained foundational and advanced concepts in deep learning and machine learning to a class of 90 students.
- Conducted office hours to assist students with assignments and coding problems, clarify doubts and provide additional learning support.
- Prepared course materials, including in-class activities, homework, and supplementary resources.
- Evaluated student performance by grading assignments, exams, and homework.

PREPRINTS

- Zheyang Xiong, Ziyang Cai, John Cooper, Albert Ge, Vasilis Papageorgiou, <u>Zack Sifakis</u>, Angeliki Giannou, Ziqian Lin, Liu Yang, Saurabh Agarwal, Grigorios G Chrysos, Samet Oymak, Kangwook Lee, Dimitris Papailiopoulos. **"Everything Everywhere All at Once: LLMs can In-Context Learn Multiple Tasks in Superposition"**. arXiv preprint arXiv:2410.05603 (2024). link

HONORS & AWARDS

- Academic Distinction, TUC (2022)
- Scholarship from State Scholarships Foundation & ANEK Sea Lines Award for graduating 1st in my class, TUC (2022)
- Honorary award for the best academic performance in TUC for the 2nd and 3rd year of my studies (2019-2020)
- Scholarship from Alkiviadis Papadrakakis Foundation for graduating high school top of my class (2016)
- Outstanding Creation Award for student history documentary (2015)
- Qualification in the last national round of the European Union Science Olympiad (EUSO) (2014)
- 1st place in high school spelling bee (2014)

TECHNICAL SKILLS

- Programming   Python, Pytorch,TensorFlow, Java, C/C++, MATLAB, R, SQL, VHDL, LaTeX

SOCIETIES & VOLUNTEERING

- Participated in Youth Exchange Erasmus+ program "Promoting Gender Equality and Social Dialogue" about gender equality in Copenhagen, Denmark (2022)
- Provided humanitarian assistance to the earthquake-stricken residents of Arkalochori (10/2021)
- Volunteered in the 7th Chania Film Festival (10/2019)
- Participated in Youth Exchange Erasmus+ program "People are Strange when you're a Stranger" about social inclusion and discrimination in Slovakia (2018)
- Member of the University Student Theater Group (2017)
- Volunteered in the TUC Science & Technology Festival for primary school children (11/2017)

LANGUAGES

- **English** (fluent), **German** (upper intermediate), **Spanish** (basic), **Greek** (native)