# VASILIS PAPAGEORGIOU

Computer Sciences Ph.D. student University of Wisconsin-Madison

vpapageorgio@wisc.edu  $\diamond$ Personal Website  $\diamond$ Google Scholar  $\diamond$  X  $\diamond$ Github

#### **EDUCATION**

University of Wisconsin-Madison (UW-Madison), Madison, WI

Ph.D. in Computer Sciences Aug 2022 - present

Advisor: Dimitris Papailiopoulos

Technical University of Crete (TUC), Chania, Greece

MEng in Electrical and Computer Engineering Sep 2016 - Oct 2021

Advisor: Aggelos Bletsas

Grade: 9.55/10 (top 0.5% in school's history as of Oct 2021)

Summa cum laude

#### RESEARCH INTERESTS

Large Language Models, Reasoning, Machine Learning, Deep Learning, Optimization

#### RESEARCH EXPERIENCE

Research Assistant Aug 2022 – present

University of Wisconsin-Madison

• Conducting Research on Large Language Models and Reasoning.

#### Undergraduate Research Assistant

Dec 2020 – Oct 2021

Technical University of Crete

• Developed an algorithmic framework for distributed and asynchronous iterative algorithms in ambiently powered wireless sensor networks.

### Electrical and Computer Engineering Intern

Jul 2019 - Jul 2019

Telecommunication Systems Research Institute, TUC

- Implemented a wireless communication link of two transmitting and a single receiving Software Defined Radios (SDR) using Matlab.
- Applied synchronization, channel estimation, detection techniques, and Alamouti's space-time block code.

#### INDUSTRY EXPERIENCE

#### Applied Scientist Intern

May 2025 - Oct 2025

AWS AI Labs, Amazon.Inc – Fundamental Research Team

• Developed a framework for utility-aware efficient reasoning in Large Language Models.

#### CONFERENCE PUBLICATIONS

- Zheyang Xiong, Ziyang Cai, John Cooper, Albert Ge, <u>Vasilis Papageorgiou</u>, Zack Sifakis, 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". ICML 2025 (**Spotlight**).
- Zheyang Xiong, <u>Vasilis Papageorgiou</u>, Kangwook Lee, and Dimitris Papailiopoulos. "From Artificial Needles to Real Haystacks: <u>Improving Retrieval Capabilities in LLMs by Finetuning on Synthetic Data." ICLR 2025.</u>

• <u>V. Papageorgiou</u>, A. Nichoritis, P. Vasilakopoulos, G. Vougioukas and A. Bletsas, "Towards Ambiently Powered Inference on Wireless Sensor Networks: Asynchrony is the Key!," 2021 17th International Conference on Distributed Computing in Sensor Systems (DCOSS), Pafos, Cyprus, 2021, pp. 458-465 (received **best paper** award)

### JOURNAL PUBLICATIONS

• <u>V. Papageorgiou</u>\*, A. Nichoritis\*, P. Vasilakopoulos\*, G. Vougioukas and A. Bletsas, "Design and Implementation of Ambiently Powered Internet of Things-That-Think With Asynchronous Inference," in *IEEE Internet of Things Journal*, vol. 10, no. 17, pp. 15283-15300, 1 Sept.1, 2023, doi: 10.1109/JIOT.2023.3265423.

### TEACHING ASSISTANTSHIP

## CS 220 (Data Programming)

Fall '24

University of Wisconsin-Madison

### MATH 101 (Intro to Calculus and Analysis)

Fall '19, Fall '20

Technical University of Crete

#### SCHOLARSHIPS & FELLOWSHIPS

#### Gerondelis Foundation Graduate Study Scholarship (\$5,000)

Nov 2023

Gerondelis Foundation

### First-year CS Departmental Scholarship (\$4,000)

Aug 2022 - May 2023

University of Wisconsin-Madison

### HONORS & AWARDS

### **Excellence Award for Undergraduate Studies**

Dec 2024

Technical Chamber of Greece

### Summa cum laude

Oct 2021

Technical University of Crete

### 2021 IEEE WCNEE Best Paper Award

Jul 2021

IEEE

### SOCIETIES & AFFILIATIONS

IEEE TUC Student Branch

Oct 2018 - Oct 2021

#### SKILLS

Technical Skills

Python, Pytorch, Matlab, C, Java, LATEX

Languages

English (fluent), German, Greek (native)

Miscellaneous

Guitar