

# Alexandros Angelakis

## PERSONAL DETAILS

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Links [GitHub](#), [LinkedIn](#), [Homepage](#)

## EDUCATION

### MSc. in Computer Science and Engineering

Feb. 2024 - Present

University of Crete (UoC)

GPA: 9.63/10.00 (ongoing)

Areas: Artificial Intelligence and Machine Learning - Signal Processing and Analysis

### BSc. in Computer Science

Sept. 2019 - June 2023

University of Crete (UoC)


GPA: 8.77/10.00 (Excellent)

Thesis: "Optimal Sensor Placement in Water Distribution Networks using graph traversal algorithms"

## EXPERIENCE

### Graduate Research Fellow

Feb. 2024 - Present

Conducting research at the *Institute of Applied Computational Mathematics (IACM)* of FORTH with *Yannis Pantazis*. Since June 2024, my role has been supported by  *Apple Inc.*, on the work based on "Implementation and Assessment of Probabilistic Divergence Estimation Algorithms with Applications in Disentangled Learning". I am focused on developing *NeuroDiME*, a library for neural-based estimation of divergences and metrics.

### Graduate Teaching Assistant (TA)

2024-2025

- TA position for the undergraduate elective course *CS370 - Digital Signal Processing*, taught by professor *Dr. George Kafentzis* (Fall Semester 2024).
- TA position for the undergraduate core course *CS215 - Applied Mathematics for Engineers*, taught by professor *Yannis Stylianou* and *Dr. George Kafentzis* (Spring Semester 2024).

### Undergraduate Research Fellow

Mar. 2023 - Aug. 2023

Undergraduate Research Fellow at the *Institute of Applied Computational Mathematics (IACM)* of FORTH, supervised by *Yannis Pantazis*. I contributed in building *NeuroDiME: A Software Library on Neural-based Estimation of Divergences and Metrics*.

### Undergraduate Intern

July 2022 - Sep. 2022

Intern at the *Institute of Applied Computational Mathematics (IACM)* of FORTH, supervised by *Yannis Pantazis*. Developed algorithms that find solutions to the Optimal Sensor Placement for the Detection and Localization of leakages in Water Distribution Networks (WDNs), using graph traversal algorithms such as Breadth-First Search (BFS).

## AWARDS

### Undergraduate Scholarship

Sep. 2020,21

Awarded for academic excellence throughout undergraduate studies and final High School Exams issued by *Greek State Scholarships Foundation (IKY)*.

### "Chrysanthos and Anastasia Karidis" Scholarship

July 2021

Awarded to the students that excelled in their final High School exams.

## SKILLS

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Programming	 Python, C,  Java
Frameworks	 Scikit-Learn,  Pandas,  Seaborn,  Matplotlib,  NumPy
DL Frameworks	 PyTorch,  TensorFlow,  JAX
Languages	English (Proficient), Greek (Native)
Soft Skills	Time Management, Teamwork, Problem-Solving, Communication

## SELECTED PROJECTS

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### Digital Speech Processing

2023

Developed VUS Discrimination, Pitch Estimation, LPC Synthesis, and Speaker Identification in Matlab for the *Digital Speech Signal Processing* course, taught by Professor *Yannis Stylianou*.

### AlphaCompiler/AlphaVM

2022

A complete compiler and virtual machine for the Alpha Programming Language (a JavaScript-like language), developed in C (both the compiler and the VM), using Lex and Yacc/Bison, for the *Languages and Compilers* course, taught by Professor Antonios Savides.

## VOLUNTEER EXPERIENCE

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### Presenter

Feb. 2024

I helped conduct my department's presentation and outreach events to high school students at the department's facilities.

### Peer Mentor

2022-23

I participated in the STEER Student Peer Mentor program in the Computer Science department at the University of Crete, where I served as a mentor to Computer Science freshmen.

### Undergraduate Teaching Assistant (TA)

2022-2023

- TA position for the undergraduate core course *CS215 - Applied Mathematics for Engineers*, taught by professor *Yannis Stylianou* and *Dr. George Kafentzis* (Spring Semester 2023).
- TA position for the undergraduate core course *CS217 - Probability*, taught by professor *Panagiotis Tsakalides* (Fall Semester 2022).
- TA position for the undergraduate elective course *CS351 - Information System Analysis and Design*, taught by *Vasilis Efthymiou* (Spring Semester 2022).