Alexandros Angelakis
Curriculum Vitae
August 2024

PERSONAL DETAILS

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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`
Graduate Research Fellow at the Institute of Applied & Computational Mathematics (IACM) of FORTH, supervised by Yannis Pantazis. I am currently contributing in building NeuroDiME: A Software Library on Neural-based Estimation of Divergences and Metrics.

Graduate Teaching Assistant   `Fall Semester 2024`
Teaching Assistant (TA) position for the undergraduate elective course CS370 - Digital Signal Processing, taught by professor Dr. George Kafentzis.

Graduate Teaching Assistant   `Spring Semester 2024`
Teaching Assistant (TA) position for the undergraduate core course CS215 - Applied Mathematics for Engineers, taught by professor Yannis Stylianou and Dr. George Kafentzis.

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 a Neural-based Estimation of Divergences and Probability Metrics (NEDIPM) Library using both PyTorch and TensorFlow.

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).

Undergraduate Trainee   `July 2021 - Aug 2021`

Undergraduate trainee in the Computer Architecture and VLSI Systems (CARV) Laboratory of the Insitute of Computer Science (ICS), FORTH, supervised by Dr. Vasilis Papaefstathiou. I was assigned to implement a simple Super Mario game using a FPGA and the AXI Lite4 interface in System Verilog.

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

Programming	C, JAVA, PYTHON
Frameworks	NumPy, Pandas, PyTorch, TensorFlow, JAX, Keras, Matplotlib, Seaborn
Languages	English (Proficient), Greek (Native)

SELECTED PROJECTS

Digital Speech Signal Processing Projects `2023`
Created the following speech processing applications: Fully-automated voiced/unvoiced/silence discriminator (VUS), Pitch estimation used for gender and age detection, Linear Prediction Coding (LPC) Analysis and Synthesis to do various speech modifications, Sinusoidal Modeling analysis and synthesis, Vector Quantization, Speech Enhancement and finally Speaker Identification. All these are implemented in Matlab. Course taught by professor Yannis Stylianou.

Digital Image Processing Assignemnts `2023`
Exercises for the HY371 Digital Image Processing course of the Computer Science Department of University of Crete, taught by professor Nikos Komodakis.

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.

VOLUNTEER EXPERIENCE

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`

Participated in the STEER: Student Peer Mentor program of the Computer Science department, University of Crete. Mentoring Computer Science freshmen, as well as answering any questions they have for the University and the CS Department.

Undergraduate Teaching Assistant `Spring Semester 2023`

Teaching Assistant (TA) position for the undergraduate core course CS215 - Applied Mathematics for Engineers, taught by professor Yannis Stylianou and Dr. George Kafentzis. TA responsibilities include grading a set of homework and answering any questions regarding it.

Undergraduate Teaching Assistant `Fall Semester 2022`

Teaching Assistant (TA) position for the undergraduate core course CS217 - Probability, taught by professor Panagiotis Tsakalides. TA responsibilities include preparing and assigning a set of homework and its solutions, as well as preparing its tutorial, answering questions and the grading of it.

Undergraduate Teaching Assistant `Spring Semester 2022`

Teaching Assistant (TA) position for the undergraduate elective course CS351 - Information System Analysis and Design. TA responsibilities included lecturing about Java Swing, JDBC, preparing students for the Phase B of the course's Project and the supervision/grading of it. The TA position was given as an award from Dr. Vasilis Efthymiou, for passing the course CS252 - Object Oriented Programming with honours.