# Andreas Kontogiannis

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#### **EDUCATION**

# National Technical University of Athens (NTUA), Greece

PhD at the School of ECE, Computation and Reasoning Lab (CoReLab)

Nov. 2023 – Present

- Advisors: Ioannis Panageas (UC Irvine), Aris Pagourtzis (NTUA)
- Selected Modules: Probabilities, Advanced Algorithms, Dynamical Systems, Measure Theory, Matrix Analysis
- Attended Modules from NKUA (unofficial): Game Theory, Approximation Algorithms

#### M.Sc. in Data Science and Machine Learning (90 ECTS)

Oct. 2021 – June 2023

- Relevant Modules: Machine Learning, Convex Optimization, Algorithmic Game Theory, Stochastic Processes, Algorithmic Data Science, Deep Learning, Computer Vision, Statistical Modelling, Data Mining
- Unanimously elected to be the student representative for the master's staff meetings

BSc and Integrated M.Eng. in ECE (5-year joint degree; 300 ECTS)

Sep. 2015 – Mar. 2021

- Major: Computer Science
- Relevant Modules: Pattern Recognition, Neural Networks, Artificial Intelligence, Algorithms and Complexity, Discrete Mathematics, Social Network Analysis, Advanced Databases, Queuing Systems, Distributed Systems

#### University of Oxford, UK

Oxford Machine Learning Summer School

July 2024

• MLx Representation Learning & Generative AI

## RESEARCH AND WORKING EXPERIENCE

# Archimedes/Athena RC, Greece

Researcher PhD Candidate (4y)

Jun. 2023 - Present

- Research Interests: optimization theory and complexity, learning in games, multi-agent RL (MARL)
- PhD full scholarship for 4 years
- Co-running an optimization theory study group, emphasizing on online convex optimization
- Advisor: Ioannis Panageas (UC Irvine)
- Research Collaborators: Panayotis Mertikopoulos (CNRS & NKUA), Vasilis Pollatos (Archimedes RU)

#### University Of Pireaus, UPRC, AI Laboratory, Greece

Research Collaborator

May. 2023 – Present

- Research Interests: deep MARL, safe MARL, cooperative exploration and reasoning, agent modelling, reasoning under partial observability (e.g. DecPOMDPs)
- Co-running an RL study group, emphasizing on safe MARL
- Mentor: George A. Vouros
- Research Collaborators: Michael M. Zavlanos (Duke University), Giorgos Stamou (NTUA)

#### Research Assistant (Part-time contract) (8m)

Oct. 2021 – May. 2022

- Research Interests: explainable deep RL, mimic learning, independent multi-agent RL
- Funded by the TAPAS project, supported by Horizon 2020 (H2020) grant
- Published at: EXTRAAMAS (1)

#### Amazon Science, ATS, Barcelona, Spain

Applied Scientist Intern (Level-4) (6m)

Oct. 2022 - Apr. 2023

- Research Interests: multi-task RL, multi-objective optimization, exponential smoothing, metrical task systems
- Studied and implemented online algorithms that smooth the predictions of a continuous forecasting model
- Published at: Amazon's internal major ML conference (AMLC)
- Mentor: Hermina Petric Maretic

# NCSR "Demokritos", SKEL - The AI Lab, Greece

Undergraduate Research Assistant & Software Engineer Intern (1y)

Mar. 2020 – Feb. 2021

- Research Interests: deep RL, state-action spaces discretization, focused web crawling, deep active learning
- Published at: Applied Sciences (1), Planta Medica (1)
- Research Collaborators: George Giannakopoulos, Georgios Paliouras

• International Conferences & Workshops

(2023). A. Kontogiannis\* and G. Vouros. Inherently Interpretable Deep Reinforcement Learning through Mimicking. EXTRAAMAS 2023 (AAMAS Workshop). [paper]

• International Journals & Transactions

(2021). E. Axiotis\*, <u>A. Kontogiannis</u>, E. Kalpoutzakis and G. Giannakopoulos. *A Personalized Machine-Learning-Enabled Method for Efficient Research in Ethnopharmacology. The Case of the Southern Balkans and the Coastal Zone of Asia Minor*. **Applied Sciences**. [paper][data]

(2021). E. Axiotis\*, <u>A. Kontogiannis</u>, E. Kalpoutzakis and G. Giannakopoulos. *Artificial Intelligence in the Deployment of Complex tasks in Pharmacology*. A case of "Big Data" challenges in Ethnopharmacology. **Planta Medica**. (Short Lecture). [paper]

# Preprints / Working Papers

(2024). <u>A. Kontogiannis</u>\*, D. Kelesis, V. Pollatos, G. Giannakopoulos and G. Paliouras. *Tree-based Focused Web Crawling with Reinforcement Learning*. arXiv. [paper] [code] (submitted for publication)

## AWARDS & HIGHLIGHTS

- PhD full scholarship for 4 years (2023 2027) by Archimedes/Athena RC
- Thomaidis Award 2021: Awarded to NTUA undergraduate students with the best publications in 2021.
- Valedictorian Award (ranked 1st among 180+ students) from High School "Lyceum Melissia" (Sep 2015)

# ACADEMIC SERVICE

#### Reviewing:

\* ICLR 2024

#### Teaching Assistantship at NTUA:

- \* Computer Programming (Fall'16, Fall'17, Fall'18, Fall'19)
- \* Programming Techniques (Spring'17, Spring'18)

## Skills & Tools

Programming Languages: Python, Prolog, Java, C/C++, SQL, R, Standard ML, SPARQL, LaTeX Data Science: PyTorch, TensorFlow, Sklearn, NumPy, Gensim, re, NLTK, PySpark, matplotlib, ggplot2

RL Frameworks & Libraries: gym, PyMARL, EPyMARL Programming IDEs: vscode, Jupyter Notebook, Dev-C++

Web Developing: Diango, Flask, requests

Languages: Greek (mother tongue), English (C2), German (B1)

**IELTS** (as of Oct 2022): 8.0/9.0 (Listening: 8.5, Reading: 8.5, Writing: 7.0, Speaking: 7.0)