

# Argyrios Gerogiannis

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## Research Interests

Reinforcement Learning, Online Learning, Large Language Model Reasoning, Imitation Learning, Autonomous Driving

## Education

### PhD in Electrical and Computer Engineering (ECE)

**Cumulative GPA: 4.00/4.00**

University of Illinois at Urbana-Champaign (UIUC), USA

Aug. 2022 - Jun. 2027 (Expected)

### Diploma (BSc+MEng) in ECE (Rank: 1/305)

**Cumulative GPA: 9.69/10.00**

University of Patras (UoP), Greece

Sep. 2017 - Aug. 2022

## Work Experience

### Netradyne Inc: AI Research Intern (Autonomous Driving)

Summer 2025 / San Diego, CA

- Developed a novel vision-encoder reinforcement learning stack for end-to-end autonomous driving.
- Achieved state-of-the-art (SOTA) performance, with an **+10%** over strong baselines on standard driving benchmarks.
- Attained **20x** training speedup via distributed runs across multiple AWS clusters (enhanced data/compute throughput).

### UIUC: Graduate Research Assistant (Reinforcement Learning)

Summer 2022-present

- Designed the first practical SOTA black-box algorithm for general non-stationary bandits, with up to **8x** performance gains.
- Identified practical feasibility gaps in the literature and proposed application-driven non-stationarity models and algorithms.
- Developed the first **model-free** reinforcement learning solution for Partial Observable Markov Decision Process target tracking with controlled sensing; deployed tractable algorithms delivering over **5%** accuracy gains vs. conventional baselines.

## Selected Publications & Preprints

DAL: A Practical Prior-Free Black-Box Framework for Non-Stationary Bandits 📄  
**Argyrios Gerogiannis**, Yu-Han Huang, Subhonmesh Bose, Venugopal V. Veeravalli

Under Submission

Track-MDP++: RL for Target Tracking with General Controlled Sensing Models  
Adarsh M. Subramaniam, **Argyrios Gerogiannis**, James Z. Hare, Venugopal V. Veeravalli

**MILCOM 2025**, Workshop WS09

Detection Augmented Bandit Procedures for PS-MABs: A Modular Approach 📄  
Yu-Han Huang, **Argyrios Gerogiannis**, Subhonmesh Bose, Venugopal V. Veeravalli

Under Submission

Is Prior-Free Black-Box Non-Stationary Reinforcement Learning Feasible? 📄  
**Argyrios Gerogiannis**, Yu-Han Huang, Venugopal V. Veeravalli

**AISTATS 2025**

Track-MDP: Reinforcement Learning for Target Tracking with Controlled Sensing 📄  
Adarsh M. Subramaniam, **Argyrios Gerogiannis**, James Z. Hare, Venugopal V. Veeravalli

**ICASSP 2025**

## Relevant Coursework

**Machine Learning & Artificial Intelligence:** MDPs & Reinforcement Learning, Machine Learning, Statistical Learning Theory, Natural Language Processing, Pattern Recognition, Artificial Intelligence

**Communications & Signal Processing:** Information Theory, Digital Signal Processing, Digital Image Processing and Analysis

**Probability & Statistics:** Statistical Inference, Detection & Estimation, Probability Theory, Random Processes

## Skills

**Programming** Python, C++, C, MATLAB  
**Frameworks** PyTorch, TensorFlow, RLlib (ray), PEFT, NumPy, pandas, scikit-learn, Hugging Face  
**Development** Git, Docker, AWS, Slurm, Weights&Biases, MLflow

## Services & Teaching

**Reviewer** ICLR 2026, ISIT 2024-2025

**Teaching Assistant** UIUC: ECE 490 (2025), ECE 313 (2025), ECE 598GM (2023)

## Honors & Awards

### Dilip and Sandhya Sarwate Graduate Fellowship

2022-2023

Awarded to outstanding incoming graduate students in the area of communications.

UIUC, USA

### University Student Excellence Award

2022-2023

Awarded to the student with the highest GPA among all 2021-2022 graduates of the ECE department.

UoP, Greece

### Student Excellence Award

2022-2023

Awarded to the student with the highest GPA among all 2021-2022 graduates of each department.

State Scholarships Foundation, Greece