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 📄 *Under Submission*
Argyrios Gerogiannis, Yu-Han Huang, Subhonmesh Bose, Venugopal V. Veeravalli

Track-MDP++: RL for Target Tracking with General Controlled Sensing Models *MILCOM 2025, Workshop WS09*
Adarsh M. Subramaniam, **Argyrios Gerogiannis**, James Z. Hare, Venugopal V. Veeravalli

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

Is Prior-Free Black-Box Non-Stationary Reinforcement Learning Feasible? 📄 *AISTATS 2025*
Argyrios Gerogiannis, Yu-Han Huang, Venugopal V. Veeravalli

Track-MDP: Reinforcement Learning for Target Tracking with Controlled Sensing 📄 *ICASSP 2025*
Adarsh M. Subramaniam, **Argyrios Gerogiannis**, James Z. Hare, Venugopal V. Veeravalli

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, 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*