Joe Kurian Eappen

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EDUCATION

PROGRAM	INSTITUTION	GPA	COMPLETION
PhD, Computer Engineering	Purdue University	3.79/4.0	12/2025 (*Expected*)
B.Tech(Hons.) & M.Tech, Electrical Engineering Minor Stream: Systems Engineering	Indian Institute of Technology Madras	8.69/10	2018

PROJECTS

Safety in Multi-agent Systems & Reinforcement Learning | Graduate Assistant   Jan. 2019 - Present
Guide: Prof. Suresh Jagannathan (CS), Purdue University
Selected Publications:
• Scaling Safe Multi-Agent Control for Signal Temporal Logic Specifications, **EJ** et al (CoRL 2024)
• Co-learning Planning and Control Policies Constrained by Differentiable Logic Specifications , XZ, LD, **EJ** et al (ICRA 2024)
• DistSPECTRL: Distributing Specifications in Multi-agent RL Systems, **EJ** & JS (ECML-PKDD'22)

Adaptive Policy Selection using Hierarchical Attention | Masters Thesis   July 2017 - May 2018
Guide: Prof. Ravindran B. (CSE), IIT-M
• Thesis: Hierarchical Approaches to Reinforcement Learning Using Attention Networks

WORK EXPERIENCE

JPMorgan Chase & Co., New York City, USA | AI Research Associate Intern   June 2023 - August 2023
• Developed algorithms for Offline Reinforcement Learning using novel discrepancy techniques (publication at **ICML 2024**).
• Worked with S. Bhatt and A. Koppel. Contributed to journal paper - Online MCMC Thinning with Kernelized Stein Discrepancy (accepted to **SIAM SIMODS**).

Synopsys, Remote, USA | Technical Intern   May 2022 - September 2022
• Developed a machine learning framework to order circuits by a property from layout files without expensive simulations.
• Devised a graph neural network-based framework with 20% gains over a CNN-based method ($\sim 75\%$ ordering accuracy).

IBM Research, Bangalore, India | Project Trainee   May 2017 - July 2017
• Adapted a deep learning model for summarization, built in Tensorflow to extract the relation between two text chunks.

RELEVANT COURSEWORK & SKILLS

CS \Electrical	Machine Learning, Deep Learning* , Computation Complexity & Languages*, Causal Inference*, Robotics* Data Structures & Algorithms, Distributed Systems*, Computer Network Systems*, Operating Systems*
Math	Probability, Statistics & Stochastic Processes; Applied Linear Algebra
Skills	Python, C, C++, MATLAB, Android SDK , LaTeX

TEACHING & SERVICE

Graduate Teaching Assistant   July 2017 - May 2023
• **Purdue University** - ECE368: Data Structures (2018, 2022), ECE39595: Software Engineering Tools (**Instructor**, 2023)
• **IIT Madras** - CS6700: Reinforcement Learning (2018)

Reviewer: AAAI (2025), ICML (2022-24), NeurIPS (2022-24), ICLR (2024-25), IROS (2023), ICRA (2023-24)

* - Courses taken at Purdue