KAPILAN BALAGOPALAN

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INTRODUCTION

My research focuses on sequential decision-making—including bandit algorithms, partial monitoring games, and reinforcement learning—with applications in fine-tuning and improving large language models and recommender systems. I have a strong foundation in theoretical machine learning and foundational models, complemented by hands-on experience in embedded C, C++, Python, Java, MATLAB, and API-level development for foundation models.

EDUCATION

University of Arizona, USA *Aug 2022 - present*
PhD in Computer Science
Overall GPA: 3.67/4.0

University of Moratuwa, Sri Lanka *Feb 2014 - Jan 2018*
B.S.(Hons) in Engineering
Department Electronic and Telecommunication Engineering
Overall GPA: 3.81/4.2

JOURNALS & CONFERENCES

- Fixed Budget is No Harder Than Fixed Confidence in Best-Arm Identification. **Kapilan Balagopalan**, Yinan Li, Tuan Nguyen, Yao Zhao, Anton Daitche, Houssam Nassif, Kwang-Sung Jun. Submitted to **AISTATS'26**: International Conference on Artificial Intelligence and Statistics. 2026.
- Minimum Empirical Divergence for Sub-Gaussian Linear Bandits. **Kapilan Balagopalan**, Kwang-Sung Jun. **AISTATS'25**: International Conference on Artificial Intelligence and Statistics. 2025.
- Fixing the Loose Brake: Exponential Tail Bounds for Stopping Time in Best Arm Identification. (co 1st author: †) **Kapilan Balagopalan**†, Tuan Nguyen†, Yao Zhao†, Kwang-Sung Jun. **ICML'25**: International Conference on Machine Learning. 2025.
- Blind Equalization in the Presence of Co-channel Interference Based on Higher-Order Statistics. Wang, G., **Kapilan Balagopalan**., Razul, S.G. et al. **Circuits Syst Signal Process 37, 4150–4161 (2018)**. doi: 10.1007/s00034-017-0744-x

PROFESSIONAL EXPERIENCE

Amazon May 2025 - August 2025
Applied Scientist Intern *Amazon, New York*

Campaign intent detection using large language models and using the intents to recommend key-words for advertisers to create optimal campaigns.

Thales Digital Identity & Security May 2020 - May 2022
Embedded Software Engineer *Thales DIS, Singapore*

Development of Smart card OS for Telco, Secure Element, Transport and Banking applications to be deployed on micro controller chips.

London Stock Exchange Group Feb 2018 - Feb 2020
Hardware Acceleration Engineer *LSEG Technology, Sri Lanka*

Acceleration of time critical modules in exchange and trading platforms using FPGAs.

Temasek Laboratory, Nanyang Technological University Aug 2016 - Dec 2016
Research Assistant *NTU, Singapore*

Blind channel equalization of OQPSK signals under strong co-channel interference using higher order statistics.

TEACHING & VOLUNTEERING ROLES

- Reviewer
  - ICML 2025 second Workshop on Test-Time Adaptation: Putting Updates to the Test!
  - NeurIPS 2025 Workshop: Reliable ML from Unreliable Data
  - ICLR 2026 Workshop: Test-time update
- Teaching Assistant
  - Spring 2025: CSC 445 Algorithms
  - Fall 2025: CSC 477/577 Computer vision