
EDUCATION

Carnegie Mellon University

December 2025

Masters of Science in Machine Learning

Current courses(PhD): Advanced Introduction to Machine Learning, Intermediate Statistics, Deep Reinforcement Learning and Control, Multimodal Machine Learning, Probabilistic Graphical Models, Convex Optimization

Birla Institute of Technology And Science (BITS), Pilani

July 2022

Bachelors of Engineering, Computer Science and Masters of Science, Economics

WORK EXPERIENCE

Google DeepMind (Previously Google Research)

Aug 2022 – Jun 2024

Researcher in Multi-Agent Systems for Societal Impact (MASSI) Lab: Full-time 2 years

Bangalore, India

- Showcased non-Markovian behavior (complicating adoption of prior SoTA Markovian RMAB systems) in the largest maternal mobile health program with 3.2 million active beneficiaries. [KDD-WS'23]
- Co-formulated novel non-Markovian Time-Series Restless Bandits for optimizing multiple interventions by developing a framework leveraging reinforcement learning to increase the program's engagement.
- Demonstrated ability for the policy to increase content exposure of cohort by 57% and preventing dropouts by 33% over a random policy. [AAAI'24]

Harvard University

Aug 2021 – Jul 2022

Research Assistant in Kreiman Lab: Full-time 1 year

Boston, MA

- Investigated interplay between catastrophic forgetting (CF) and OOD generalization ability using 3D modeling and examined adaptability of continual learning algorithms to continuous domains.
- Demonstrated that models exhibit a saturation point in performance with respect to CF and generalization as number of tasks increases. [Thesis]

Microsoft

May 2021 – Jul 2021

Software Development Intern in Cloud+Artificial Intelligence team

Hyderabad, India

- Built an End-to-End service providing user insights to reporting services of the Playwright tool.

SELECTED PUBLICATIONS AND THESIS

1. **Improving Health Information Access in the World's Largest Maternal Mobile Health Program via Bandit Algorithms.** *Oral Presentation @ The Association for the Advancement of Artificial Intelligence Conference [Track: IAAI] 2024.* [AAAI'24]
2. **Analyzing and Predicting Low-Listenership Trends in a Large-Scale Mobile Health Program: A Preliminary Investigation.** *Oral Presentation @ Data Science for Social Good Workshop, KDD 2023.* [KDD-WS'23]
3. **Adherence Bandits.** *Artificial Intelligence for Social Good Workshop, AAAI 2023.* [AAAI-WS'23]
4. **Continual Learning and Out Of Domain Generalization in Continuous Domain Adaptation.** [Thesis]

SELECTED PROJECTS

- **Incentive Mechanisms for LLM-Assisted Textual Data Integrity:** Working under Prof. Nihar Shah to design mechanisms to counter LLM assisted responses in feedback platforms, such as peer reviews. *Present*
- **Constrained Output Optimization for GPT-2:** Implemented Greedy Coordinate Gradient (GCG) to optimize prompts for keyword-specific outputs on GPT-2 under strict token-length constraints. *Jan 2024*
- **Building Gen AI-Powered LaTeX Editor:** Developing a LaTeX editor with AI-driven suggestions. *Present*
- **Improving Image Generation with Denoising Diffusion Models:** Applied DDPM to reconstruct and denoise Pokémon images, demonstrating core principles of generative modeling. *Nov 2024*

KEY ACCOMPLISHMENTS AND EXPERIENCE

- Cleared Regional Mathematics Olympiad (RMO); Qualified for Indian National Mathematics Olympiad (INMO).
- Teaching Assistant for: Deep Reinforcement Learning and Control (CMU), Object Oriented Programming (BITS), Database Systems (BITS), Econometric Methods (BITS).

SKILLS

Frameworks and libraries: Pytorch, Sklearn, Numpy, Pandas, React

Programming Languages: Python, Java, C++, R, Stata

AI/ML Frameworks and Models: Diffusion Models, Transformers, Generative AI, Reinforcement Learning