

Stanford University

Sept 2024 – June 2026

MS in Computer Science (AI Specialization)

3.93/4.0

Indian Institute of Technology, Kharagpur

2019 - 2023

 $\label{eq:computer Science and Engineering (B.Tech) - Department\ Rank\ 3/76,\ Best\ Undergraduate\ Thesis}$

9.77/10.0

Publications

Certified Unlearning for Neural Networks

[PDF] [Code]

Anastasia Koloskova*, Youssef Allouah*, **Animesh Jha**, Rachid Guerraoui, Sanmi Koyejo

ICML 2025

RL-Guided Data Selection for Language Model Finetuning

[PDF] [Code]

Animesh Jha*, Harshit Gupta*, Ananjan Nandi*

COML Workshop NeurIPS 2025

Local NMPC on Global Optimised Path for Autonomous Racing

[PDF] [Code]

Animesh Jha*, Dvij Kalaria*, Parv Maheshwari* et al.

OCAR Workshop ICRA 2021

Research Experience

Efficient and Certified Machine Unlearning | Prof. Sanmi Koyejo | Stanford

August 2024 – Present

- Developed the first certified unlearning mechanism for general neural networks via differentially private post processing
- Using techniques from sketching, algorithmic stability, and compressed sensing to extend certified unlearning to large models

Compilation for Distributed Databases | Prof. Fredrik Kjolstad | Stanford

April 2025 – Present

- Represented relational algebra as tensor algebra, leveraging distributed tensor algebra to enable efficient query execution
- Implementing a scheduling interface to optimize query execution and validate compliance with data movement policies

Robust Distributed Learning | Prof. Simon S. Du | UW | Undergraduate Thesis

2021 - 2023

- Designed and analyzed Byzantine Fault Tolerant algorithms for efficient distributed training with non convex loss functions
- Established lower bounds on the number of iterations for finding ϵ approximate critical points in the presence of adversaries
- Analyzed how such algorithms can be used for Federated Learning with secure aggregation, using Zero Knowledge Proofs

Industry Experience

Cartesia AI | Intern - Serving Infrastructure | San Francisco

June 2025 – September 2025

- Designed modular task framework to decouple CPU/GPU scaling, optimizing resource utilization & reducing inference costs
- Reduced Batch Speech-To-Text latency by > 75% for long audio (> 1hr) via optimized chunking and in-memory caching

Rubrik, Inc. | SWE - Platform (Core Infrastructure) | Bangalore

June 2023 – August 2024

- \bullet Reduced upgrade time by 45% and saved 120 developer hours daily, through safe parallelization of orchestration steps
- Migrated 10TB/day ETL pipelines from AWS EMR to Kubernetes, boosting throughput by 35% and reducing costs by 67%
- Led hackathon project to develop a managed solution for sensitive data analysis through Intel SGX hardware enclaves

Selected Projects

Curriculum Learning for Efficient LLM Reasoning | CS 329A (Self Improving Agents)

Autumn 2025

- Formulated minibatch sampling as Online Convex Optimization, using Mirror Descent for adaptive batches during training
- Finetuned Qwen3-8B via curriculum-aware GRPO pipeline on Math and DeepMath, outperforming random sampling

RL based Data Selection for Finetuning LLMs | CS 224R (Deep RL) | [Code]

Spring 2025

- Formulated data selection as a Sequential Decision Making problem, learnt policies via PPO to select training subsets
- Achieved accuracy close to full-dataset training while selecting only 5% of the original data, reducing training time by 2×

ACHIEVEMENTS

- Secured All India Rank 60 in the Kishore Vaigyanik Protsahan Yojna (SA, 2017) conducted by Government of India
- Awarded the National Talent Search Examination Scholarship (2017) by the Government of India.
- National Finalist (among the top 5 teams out of 25000+ participants) at the Uber Hacktag 1.0 2021.
- ACM ICPC Regionalist: Qualified for and placed 44th out of 7000+ teams at the Gwalior Pune ICPC Regionals 2020.

TECHNICAL SKILLS

- Languages: C++, Python, Go, C, LATEX, Scala, Verilog
- Libraries: Jax, Pytorch, Numpy, vLLM, verl, OpenMP, Eigen, Selenium, BeautifulSoup, Pandas, Flask, Scikit-Learn
- Tools: Git, ROS, Terraform, Bazel, Docker, Kubernetes, AWS, Azure, Apache Spark, Snowflake, NATS, Blender