

ABOUT

I am actively seeking Research Scientist, Machine Learning Engineer roles. I am passionate about large-scale sequential models, generative search, and retrieval & ranking systems. I also believe in user privacy and enhancing performance across diverse user segments using techniques from differential privacy and algorithmic fairness, check out Publications | Writings for more!

EDUCATION

Ph.D. (Machine Learning), Georgia Institute of Technology Advisor: Dr. Juba Ziani	Sep 2021 - March 2026
Masters in Computer Science, École Normale Supérieure de Lyon, France	Sep 2019 - Aug 2020
BE Computer Science, Birla Institute of Technology and Science Pilani, India	Aug 2015 - Dec 2018

EXPERIENCE

Amazon	Seattle, US
Applied Scientist Intern Pricing Science	Sep 2025 - Present
Integrated the Captum library into our ASIN pricing workflows to obtain explainability metrics such as layer attributions, attention weights, and developed LLM-based narratives grounded in these metrics to support legal review in critical cases, such as seller disqualification.	

Pinterest	Palo Alto, CA
MLE intern Ads Candidate Generation	May 2025 - Aug 2025
- Trained a non two-tower model for Pinterest Search Ads, with 11% MRR and 15% Recall gains over dot-product based TT models. - Built co-training and two-stage knowledge distillation workflows to distill the non two-tower teacher into a two-tower student, preserving the teacher's Recall and MRR gains while leveraging existing ANN infra to efficiently serve the student.	

Amazon	Edinburgh, UK
Applied Scientist Intern	July 2024 - Nov 2024
- Standard training of Transformer models like SASRec optimizes for the average user, often at the expense of less typical user groups. To address this, I integrated minimax fairness & Distributionally robust optimization(DRO) algorithms into the training pipeline. - CVaR DRO, a group-agnostic training method performed best, boosting both overall and worst-group nDCG by up to 20%.	

Keysight Technologies	Atlanta, GA
MLE Intern	May 2023 - Jul 2023
- Enhanced an internal library with conformal prediction functionality for multi-class classification & multi-target regression. - Optimized a Deep RL pipeline for Wireless CoMP, fixing environment step bottlenecks with Ray-RLlib, achieving a 16x training speedup.	

LIG - Université Grenoble-Alpes	Grenoble, France
Research Intern	Feb 2020 - Jul 2020
Formalized the Ad campaign problem with a balanced exposure constraint across user genders. Applied value iteration against known competitors, and used online reinforcement learning for efficient and fair bidding strategies against unknown competitors.	

SELECTED PAPERS

GLoSS: Generative Language Models with Semantic Search for Sequential Recommendation	OARS workshop@KDD2025 Code
K.Acharya, A.V.Petrov, J.Ziani	
Improving Minimax Group Fairness in Sequential Recommendation	ECIR 2025 Code
K.Acharya, D.Wardrope, T.Korres,A.V.Petrov, A.Uhrenholt	
Producers Equilibria and Dynamics in Engagement-Driven Recommender Systems	TMLR 2025, Code
K.Acharya, V.Vangala, J.Wang, J. Ziani	
Oracle Efficient Algorithms for Groupwise Regret	ICLR 2024, Code
K.Acharya, E. Arunachaleswaran, S.Kannan, A.Roth, J. Ziani	
Personalized Differential Privacy for Ridge Regression	Privacy workshop @ICLR2024, Code
K.Acharya, F.Boenisch, R.Naidu, J. Ziani	
One Shot Inverse Reinforcement Learning for Stochastic Linear Bandits	UAI 2024, Code
E.Guha, J.James, K.Acharya, V. Muthukumar, A.Pananjady	

SKILLS

Key areas: Recommender systems, Large language models, Reinforcement learning, Algorithmic fairness, Differential privacy, Distributionally Robust optimization. **Technical:** Python, C++, PyTorch, Hugging Face, DeepSpeed, vLLM, Unsloth, Ray, Pandas, Git, $\LaTeX$.

NOTABLE EXPERIENCE & AWARDS

- Kiplinger Fellowship** (Fall 2021), **University of Lyon Scholarship of Excellence** (Fall 2019, Spring 2020), **Merit Scholar BITS Pilani**(2015,2016)
- Reviewer** for ICML, NeurIPS, ICLR, AAAI, KDD.
- Teaching Assistant** ISyE 4803: Online Learning & Decision Making, ISyE 2027: Probability & Applications, ISyE 3133: Engineering Optimization.
- Relevant courses:** **PhD:** Deep learning, High Dimensional probability, Convex optimization, Online learning, Machine learning theory **Masters and Undergrad:** Probability theory, Linear algebra, Real analysis, Statistical Inference, Algorithm Design, Differential Eqns.
- Represented ENS de Lyon in the **ACM ICPC regionals** at SWERC 2019