

OBJECTIVE

PhD student in machine learning with MS in pure math, Looking for research roles summer 24, open to software Engineering roles, open to full time positions.

EDUCATION

Cornell University **Ithaca, NY** **Aug 2022 – May 2025 (Expected)**

- **P.hD in Computer Science** Research in AI; optimization, data driven methods, NLP.
- **Relevant Courses:** Machine learning in feedback systems, Reinforcement Learning, ML, Analysis of Algorithms, Advanced Programming Languages Tech: OCaml, Differential Manifolds

Cornell University **Ithaca, NY** **Aug 2019 – May 2022**

- **P.hD in Mathematics:** (unfinished - transferred to CS) Research in number theory

Sharif University of Technology **Tehran, Iran** **Aug 2015 – May 2019**

- **B.Sc. in mathematics**
- **Relevant (Graduate) Courses:** Game theory, Algebraic graph theory, probability, numerical analysis Tech: Matlab

WORK EXPERIENCE

Oxfam **May 2023-August 2023**

- **Reading social media at scale:** Leveraged NLP techniques as a *Siegel PiTech Impact Fellow* to analyze online discussion space on Amazon/Walmart warehouse workers. Developed a robust data processing pipeline and utilized topic modeling to extract insights and sentiments from the data, showcasing the potential of NLP in understanding large-scale social media conversations and providing actionable insights for advocacy efforts.(sole contributor)(python, bash)

RESEARCH AND PROGRAMMING PROJECTS

- Developing **LearnFlow** an RL-based topic modeling interactive information retrieval system that adapts to user input, enhancing the retrieval of ambiguous questions.(sole contributor- in progress)
- Designed **Data-driven Control Methods** to ensure stability and safety in unknown systems. Implemented random Fourier features approximation for efficiency, *maintaining accuracy with linear time and memory complexity*—outperforming traditional kernel methods. Introduced a fast, robust convex optimization-based min-norm controller, showcased through control of an unknown acrobat. (sole contributor) (Python, Numpy, CVXPY, Seaborn)
- Audit databases to determine if user ratings provides information to identify content sensitivity. (group project - in progress)(Python, Numpy, Scikit-Learn, Scipy, Pandas)
- **Namegen:** An RNN model generating unique names for babies/startups, wrote to practice (sole contributor) (Pytorch)
- **CarObs:** Implemented a game where cars will need to spin over obstacles to avoid them (sole contributor) (Java)

PUBLICATIONS AND EXPOSITORY PAPERS

- **K. Kazemian**, the effects of calibration on fairness
- **K. Kazemian**, Sarah Dean. Random Features Approximation for Fast Data-Driven Control. *NeurIPS Workshop on Gaussian Processes, Dec 2022*
- **K. Kazemian**, G. Li. on Bounds for Matrix Multiplication Complexity, *expository paper, Dec 2022*
- S. Akbari, A. Ghafari, **K. Kazemian**, M. Nahvi Some Criteria for a Signed Graph to Have Full Rank. *Discrete Mathematics, Volume 343, Issue 8. August 2022*
- **K. Kazemian**, Kleene algebra with domain and Kleene Modules, *expository paper, Dec 2019*

MISCELLANEOUS

Teaching Assistant **Cornell** **Aug 2019 - Aug 2022**

holding recitations/labs, office hours and grading

- Introduction to combinatorics, differential equations and dynamical systems, matrix groups, multivariable calculus(class of 500+ students), Analysis of algorithms, Introduction to python
- Chief Editor of *Sharif Mathematical Journal*, Issues 9 and 10: Managed a team of 30 people every aspect of production.
- GRE subject math 860/900, 88th percentile.
GRE general verbal: 159/170, 83rd percentile, quant: 170/170, 96 percentile