Kamiar Asgari

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General Information

- **Full Name:** Kamiar Asgari
- **Nickname:** Kamy
- **Languages:** Persian (Farsi) - Native, English - Fluent (Second Language)
- **Summary:** Kamiar Asgari, currently pursuing his Ph.D. in Electrical Engineering at USC, is all about making complex optimization problems simpler and more efficient. He started this journey with a B.S. from Sharif University in Iran and now, he's looking to bring his skills into the industry, diving into everything from optimization to deep learning. Kamiar believes in staying positive even when things get tricky, a lesson he's learned from his research. He's pretty handy with Python and MATLAB, knows his way around Linux/GNU and Git, and is always up for teaming up with others who are just as passionate about pushing the boundaries in deep learning.

Education

- **Ph.D., Electrical Engineering**
  - **Department:** Department of Electrical and Computer Engineering
  - **Institution:** University of Southern California (USC)
  - **Location:** Los Angeles, CA
  - **Year:** Aug 2018 - May 2025
  - **Description:**
    - Supervised by Prof. Michael J. Neely.
  - **Research Focus:** Convex Optimization
    - Nonsmooth Convex Functions
    - Large-Scale (High-Dimensional) Challenges in Convex Optimization
    - Stochastic First-Order Methods
    - Projection-Free Techniques
    - Bregman Divergence
    - Optimization in Online Environments
    - Functional Constraints
    - Primal-Dual Methods
  - **Courses**
    - "Large Scale Optimization and Machine Learning (ISE-633)"
    - "Machine Learning for Data Science (DSCI-552)"
    - "A Computational Introduction to Deep Learning (EE-541)"
    - "Stochastic Network Optimization (EE-649)"
    - "Analysis of Algorithms (CSCI-570)"
    - "Foundations of Stochastic Processes (ISE-620)"
    - "Mathematical Pattern Recognition (EE-559)"
    - "Random Processes in Engineering (EE-562)"
    - "Data Networks: Design and Analysis (EE-550)"
    - "Fundamental Concepts of Analysis (MATH-425A)"
- **Bachelor of Science in Electrical Engineering with a Specialization in Telecommunications**

- **Department:** Department of Electrical Engineering
- **Institution:** Sharif University of Technology (SUT)
- **Location:** Tehran, Iran
- **Year:** Aug 2014 - Aug 2018

Experience

- **Research Assistant at Communication, Information, Learning, and Quantum (CILQ) group**
  - **Institution:** USC
  - **Year:** Aug 2019 - May 2025
  - **Description:**
    * Advised by Prof. Michael J. Neely.
    * Published "Nonsmooth Projection-Free Optimization with Functional Constraints" and "Bregman-Style Online Convex Optimization with Energy Harvesting Constraints".
- **Research Assistant at Cyber-Physical Systems Group**
  - **Institution:** USC
  - **Year:** Aug 2018 - May 2019
  - **Description:**
    * Advised by Dr. Paul Bogdan.
    * Investigation of Anomalous Diffusion Phenomena through Fractional Calculus Methods.
    * Published "Identifying Arguments of Space-Time Fractional Diffusion, Data-Driven Approach".
- **Teaching Assistant, Probability for Electrical and Computer Engineers (EE503)**
  - **Institution:** USC
  - **Year:** Fall 2023 & Fall 2019
  - Taught by Prof. Konstantinos Psounis.
- **Teaching Assistant, Design and Analysis of Computer Communication Networks (EE550)**
  - **Institution:** USC
  - **Year:** Spring 2023
  - Taught by Prof. Michael J. Neely.
- **Research Assistant at the Optical Networks Research Laboratory**
  - **Institution:** SUT
  - **Year:** Aug 2017 - Apr 2018
  - Advised by Prof. Jawad A. Salehi.
  - Development and Evaluation of DNA Sequence Alignment Utilizing Optical Parallel Processing Techniques.
- **Research Internship at the Advanced Communications Research Institute**
  - **Institution:** SUT
  - **Year:** Summer 2016
  - Advised by Prof. Marvasti, Farokh.
  - "Exploring Matrix Completion and Compressed Sensing via Convex Optimization Methods."

Technical Skills

- Proficient in Convex Optimization, algorithmic complexity, and Convex Analysis. Skilled in Probability, Statistics, and Statistical Learning Theory. Hands-on experience in Deep Learning, with an intuitive grasp of its theory.
- Experienced in Python, Pytorch, Keras; familiar with GNU/Linux and Git; competent in Matlab.

Mentorship And Volunteering

- Three-time participation in the Viterbi Graduate Mentorship Program.
- Active involvement in community service initiatives through the USC Volunteer Center, including neighborhood cleanup projects in Koreatown.
- Dedicated volunteering with The Viterbi Impact Program, where I contributed to the success of the Viterbi K-12 Center's Annual MESA and Hustle N' Code Hackathon events.

Honors and Awards

- **2023:** Winner of Best Poster Award at USC-Amazon Center's 2nd Symposium. Presented research on Nonsmooth Projection-Free Optimization.
- **2014:** National Elite Foundation of Iran Fellowship. Granted a Full Undergraduate Scholarship.
- **2013:** Bronze Medalist in the 23rd Nationwide Iran Physics Olympiad.

Presentations

- The paper "Nonsmooth Projection-Free Optimization with Functional Constraints" was presented in Informs Annual meeting 2023.
- The paper "Bregman-Style Online Convex Optimization with Energy Harvesting Constraints" was presented in ACM SIGMETRICS 2021.

Academic Interests

- **Primary Focus "Convex Optimization with First-Order Oracle"**
  - Projection-Free Methods for Nonsmooth Challenges
  - Utilization of Bregman Divergence in Broader Contexts
- **Additional Academic Pursuits**
  - Theory of Deep Learning
  - Statistical Learning Theory, including ERM, SRM, and PAC
  - Decision-Making Algorithms, covering Bandit Algorithms and Online Convex Optimization

My Other Interests

- I've got a soft spot for physics, and I'm always looking for opportunities to learn more about it.
- I'm a history, economics, and philosophy buff, especially digging into the economies of ancient empires.
- I'm a big fan of comedy, especially stand-up! I had such a blast taking the Improv course at USC not once, but twice!
- Soccer is my favorite sport. Even though my technique isn't perfect, I'm good at understanding the game and playing as a team member.