Ahmadreza Momeni

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EDUCATION

Stanford University — Stanford, CA
Ph.D. candidate in Electrical Engineering - GPA: 3.91 — *Sept. 2015 – Present*
Thesis advisor: Prof. Yonatan Gur
Thesis title: Adaptivity and Efficiency in Sequential Experiments

Stanford University — Stanford, CA
M.Sc. in Electrical Engineering - GPA: 3.91 — *Sept. 2015 – Jun. 2018*

Sharif University of Technology — Tehran, Iran
B.Sc. in Electrical Engineering - GPA: 4 — *Sept. 2011 – May 2015*

PROFESSIONAL EXPERIENCE

Adobe — San Jose, CA
Data Science Intern for the Cloud Experience Team — *Summer 2020*
- Designed, implemented, and optimized algorithms in Python/PyTorch for the prediction of future contracts' sizes, using Deep Recurrent Neural Networks which significantly improved upon their state-of-the-art models
- Performed in-depth analysis of the performance of the algorithms over different cases

Facebook — Menlo Park, CA
Research Collaborator for the Core Data Science (CDS) Team — *June 2020 - Present*
- Based on my work in "Adaptive Sequential Experiments with Unknown Information Arrival Processes"
- Modeled their SMS routing problem as a multi-armed bandit problem with auxiliary information
- Designed, implemented, and optimized the proposed algorithms in our paper, in Python for their internal use

Hong Kong University of Science and Technology — Hong Kong
Undergraduate Research Intern — *Summer 2014*
- In-depth analysis of the problem of acoustic wireless data communication in water pipes both analytically and numerically

RESEARCH PAPERS

- **A. Momeni**, Y. Gur "Adaptive Learning with Unknown Information Flows." *Advances in Neural Information Processing Systems. NeurIPS 2018.*
  - **finalist for the 2018 Applied Probability Society best student paper award**

- **A. Momeni**, Y. Gur, and S. Wager "Smoothness-Adaptive Contextual Bandits." submitted to *Operations Research.*
  - **honorable mention in the 2020 George Nicholson paper award**

- **A. Momeni**, Y. Gur "Adaptive Sequential Experiments with Unknown Information Arrival Processes." submitted to *Operations Research.*

- F. Rezayi, **A. Momeni**, and B. Khalaj "Delay Analysis of Network Coding in Multicast Networks with Markovian Arrival Processes: A Practical Framework in Cache-Enabled Networks." *IEEE Vehicular Technology Society.* 2018.

SELECTED COURSES

- Fundamentals of Data Science (MS&E 226)
- Machine Learning (CS 229)
- Reinforcement Learning (MS&E 338)
- Deep Learning (CS 230)
- Programming Abstractions in C++ (CS 106B)
- Convex Optimization I (EE 364A)
- Convolutional Neural Networks (CS 231N)
- Introduction to Artificial Intelligence (CS 221)

PROGRAMMING SKILLS

Python:●●●●◖ TensorFlow/PyTorch:●●●●◖ R: ●●●●○ SQL:●●●◖○

C++: ●●●◖○ MATLAB: ●●●●◖ Julia:●●●●○

Honors and Awards

- **George Nicholson Paper Award - Honorable Mention** — Virtual
  Institute for Operations Research and the Management Sciences (INFORMS) — *2020*
- **Applied Probability Society Best Student Paper Award - Finalist** — Phoenix, AZ
  Institute for Operations Research and the Management Sciences (INFORMS) — *2018*
- **Teaching Fellowship** — Stanford, CA
  Department of Electrical Engineering, Stanford University — *Summers 2016 & 2017*
- **Graduate Student Fellowship** — Stanford, CA
  Department of Electrical Engineering, Stanford University — *2015 - 2016*
- **Top Student,** ranked **1st** among more than 180 undergraduate students — Tehran, Iran
  Department of Electrical Engineering, Sharif University of Technology — *Class of 2015*
- **National Elite Fellowship** — Tehran, Iran
  Iran's National Elites Foundation — *2011 - 2015*
- **Top 5 Students,** among more than 300,000 participants — Tehran, Iran
  Nation-Wide Undergraduate University Entrance Examination — *2011*

Teaching Experience

- **Teaching Assistant** — Stanford, CA
  CS 230: Deep Learning — *Winter and Spring 2019*
  A Master-level course covering the foundations of Deep Learning to help understand how to build neural networks in TensorFlow or PyTorch, and to lead successful machine learning projects
- **Teaching Assistant** — Stanford, CA
  OIT 276: Data and Decisions — *Winter 2021*
  An MBA course that covers statistics topics such as linear regression and hypothesis testing, along with coding in R
- **Instructor (lecturer)** — Stanford, CA
  EE 364A: Convex Optimization I — *Summer 2017*
  A PhD-level course that concentrates on solving convex optimization problems arising in real applications with coding in Python/MATLAB
- **Instructor (lecturer)** — Stanford, CA
  EE 263: Linear Dynamical Systems — *Summer 2016*
  A Masters-level course that concentrates on applied linear algebra and linear dynamical systems with coding in Python/MATLAB/Julia

Invited Talks and Conference Presentations

- **Adaptive Learning with Unknown Information Flows**
  - *ICML Workshop on Exploration in Reinforcement Learning;* Stockholm, Sweden — *Jul., 2018*
  - *INFORMS Annual Meeting;* Phoenix, AZ — *Nov., 2018*
- **Adaptive Sequential Experiments with Unknown Information Flows**
  - *INFORMS Annual Meeting;* Seattle, WA — *Nov., 2019*
  - *Causal Inference Seminar;* Stanford, CA — *Jan., 2020*
  - *INFORMS Annual Meeting;* virtual — *Nov., 2020*
  - *INFORMS Revenue Management and Pricing Conference;* Stanford, CA — *Jun., 2019*
  - *Kellogg-Wharton OM Workshop;* virtual — *Jul., 2020*
- **Adaptive Sequential Experiments With Unknown Information Arrival Processes**
  - *INFORMS Annual Meeting;* virtual — *Nov., 2020*
- **Smoothness-Adaptive Contextual Bandits**
  - *INFORMS Annual Meeting;* virtual — *Nov., 2020*
- **Learning to Utilize Auxiliary Information throughout Sequential Experiments**
  - *INFORMS Annual Meeting;* virtual — *Nov., 2020*

Academic Review Work

I have served as a reviewer for the following venues:

- **Operations Research journal** — *2020*
- **Advances in Neural Information Processing Systems (NeurIPS)** — *2020*
- **International Conference on Machine Learning (ICML)** — *2020*