Mobin Yahyazadeh

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Department of Management Science and Engineering
Stanford University

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EDUCATION

Stanford University, Management Science and Engineering Department   2018-Present
  - Ph.D. Candidate **Operations Research**
     Advisor: Irene Lo
  - M.S. **Operations and Analytics**   2018-2021

Sharif University of Technology, Tehran, Iran   2013-2018
  - B.Sc. **Computer Engineering** with a minor in **Economics**   *GPA*: 4.0

PUBLICATIONS

Decentralized Matching in a Probabilistic Environment   **EC'21**
M. Yahyazadeh, I. Lo, T. Pollner, A. Saberi
The Twenty-Second ACM Conference on Economics and Computation, Budapest, Hungary

Optimal Lower Bounds for Universal Relation, and for Samplers and Finding   **FOCS'17**
Duplicates in Streams
M. Kapralov, J. Nelson, J. Pachocki, Z. Wang, D. P. Woodruff, M. Yahyazadeh
The 58th IEEE Symposium on Foundations of Computer Science, Berkeley, California, United States

EXPERIENCE

Stanford University, CA, USA
  - *SFUSD Zoning*: We collaborate with San Francisco Unified School District (SFUSD) to design a system in which elementary schools are assigned in a more equitable and efficient manner. Our proposed solution begins with the designation of *zones* whereby students are only able to apply to schools within the limits of the zone they live. In order to optimize the construction of these zones, I modeled the problem with a linear program in which I impose constraints on the balance of race, gender, and socioeconomic status across the zones, as well as the contiguity and compactness for each zone. This is a work in progress, as the sheer size of San Francisco adds to the difficulty of the problem. In collaboration with the SFUSD office, this work will be implemented in San Francisco by 2025.

Apple Inc, Advanced Analytics Team, Cupertino, CA, USA.   Summer 2022
  - **Anomaly Detection in Multi-Variate Time Series.**
  - Post assembly failure prediction using supervised learning.

Microsoft Inc, Redmond, WA, USA.   Summer 2021
  - Data Science role to predict capacity consumption ratio between different operating systems deployed in Microsoft Azure, based on fragmentation and structure of the computation center.

EPFL University, Lausanne, Switzerland.   Summer 2016, Summer 2017
  - In collaboration with Prof. Kapralov: Providing a tighter memory bound for f L_0 samplers. And bounding the required memory to find connected components of a large dynamic graph in a one-pass streaming model. Results are published in the FOCS'17 paper referenced above.
  - Parallel Systems Architecture Laboratory: Developing parallel algorithm for FPGA graph routing.

Sharif University of Technology, Tehran, Iran
  - Undergraduate thesis: Approximation solutions for K-center problem with penalties in a map-reduce model, and also a large class of diversity maximization problems in euclidean space in a composable coreset model.

HONORS
& AWARDS

Doing Good with Good OR student paper competition finalist at INFORMS	2022
The Heitz Fellowship Fund	2022
Jerome Kaseberg Doolan Fellowship Fund	2021
Stanford University Doctoral Fellowship	2018-2020
Full scholarship to **ITCSC Winter School, CUHK**, Hong Kong	2015
10th place in **Regional ACM**, Tehran	2014
Gold Medal in the 30th Iranian **National Mathematics Olympiad**	2012

RESEARCH
INTERESTS

Matching Theory, Revenue Maximization in Two-Sided Platforms, Social Networks, Algorithmic Game Theory, Streaming Algorithms

PRESENTATIONS   **Decentralized Matching in a Probabilistic Environment**
- *ACM Conference on Economics and Computation* (**EC'21**)   July 2021
- *Marketplace Innovation Workshop* (**MIW'21**)   May 2021
- *Highlights of Algorithms, The London School of Economics and Political Science* (**HALG'21**)   May 2021
- *INFORMS Annual Meeting* (**INFORMS'21**)   Oct 2021

RELATED COURSES   Reinforcement Learning, Massive Data Algorithms, Convex Optimization, Stochastic Systems, Social Data Analysis, Modern Information Retrieval, Design and Analysis of Algorithms, Linear Programming, Linear Algebra, Design of Approximation Algorithms, Matching Theory, Microeconomics, Game Theory

TEACHING EXPERIENCE   **Teaching Assistant**
- MS&E 319 (*Matching Theory*), Stanford University, Professor Amin Saberi   Fall 2019
- MS&E 135 (*Networks*), Stanford University, Professor Johan Ugander   Winter 2019
- MS&E 211 (*Introduction to Optimization*), Stanford University, Professor Ashish Goel   Spring 2020
- Design of Algorithms, Sharif University, Professor Mohamad Ghodsi   Fall 2017

SKILLS   Programming Languages: Python, C/C++
Hobbies: Surfing, Motorcycling, Eating!