Majid Daliri

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Education

New York University, New York, USA Ph.D. in Computer Science

2022 - 2027

Advised by Prof. Christopher Musco

University of Tehran, Tehran, Iran

2017 - 2022

Undergraduate student of B.Sc. in Computer Engineering

• Cumulative GPA: **3.97/4.0**

Publications

• KDEformer: Accelerating Transformers via Kernel Density Estimation

(ICML) 2023

Amir Zandieh, Insu Han, **Majid Daliri**, Amin Karbasi

Weighted Minwise Hashing Beats Linear Sketching for Inner Product Estimation (PODS) 2023
Aline Bessa, Majid Daliri, Juliana Freire, Cameron Musco, Christopher Musco, Aécio Santos, Haoxiang Zhang

- Efficient Approximations for Cache-conscious Data Placement (PLDI) 2022 Ali Ahmadi, Majid Daliri, Amir Kafshdar Goharshady, Andreas Pavlogiannis
- A 10-Approximation of the $\frac{\pi}{2}$ -MST Ahmad Biniaz, Majid Daliri, AmirHossein Moradpour

Research Internship

Research Internship, Simon Fraser University

Aug 2021 - Feb 2022

(STACS) 2022

under the supervision of Prof I. Shinkar, I participated in a research internship focusing on the analysis of Boolean functions. Our primary approach involved exploring the Fourier aspects of these functions to gain deeper insights into their behavior and properties.

Research Internship, HKUST

Jun 2021 - Jun 2022

under the supervision of Professor A. Goharshady, my project was to design an algorithm to parameterize the cache-conscious data placement and find the exact cache misses or an approximation.

Research Internship, Max-Planck-Institut für Informatik Apr 2021 - Jan 2022 under the supervision of Dr A. Zandieh, the research has focuses on improving the time complexity and reducing the sample counts of the approaches associated with the learning and reconstruction of Fourier of sparse set functions.

Research Internship University of Windsor, Canada Feb 2021 - Feb 2022 Under the supervision of Professor A. Biniaz, working on some computational geometry problems, specifically on topics associated with the Euclidean Minimum Spanning tree.

Awards and Honors

Research Grant, University of Salzburg

2022

Awarded a €5,000 grant for a research internship focusing on algorithms for distribution bisimilarity, probabilistic systems verification, and quantum annealing projects.

Hong Kong PhD Fellowship Scheme (HKPFS) scholarship

2022 totaling HK\$1,445,200 (approximately \$184,100). I was among the top 300 students selected worldwide across all majors, showcasing academic excellence and research potential.

ACM ICPC - Regional (University of Tehran)

2019

ranked 6^{th} among more than 100 team all around the Iran.

Iranian National Olympiad in Informatics Finalist (IOI, Iran)

2016

are awarded to around 50 selected after a year of competition among over 10000 Students.

Service

Reviewer for Royal Society Open

External Reviewer for Canadian Conference on Computational Geometry (CCCG 2023)

Conference Presentations

Accelerating Transformers via Kernel Density Estimation

Poster

(ICML) 2023

Weighted MinHash for Inner Product Estimation

Poster

(PODS) 2023

Efficient Approximations for Cache-conscious Data Placement Presentation (PLDI) 2022

Teaching

Section Leader for CSCI-UA 310 Basic Algorithms

Spring 2023

Teaching Assistant NYU CS-GY 6763 Algorithmic Machine Learning and **Data Science** Fall 2022

Work Experience

Site Reliability Engineer at Cafebazaar

2021 - 2022

Cafebazaar, part of the Hezardastan Group, houses an internal company named Sotoon, known for its advanced Cloud and AI services. With the use of cutting-edge technologies, Sotoon provides exceptional support and solutions to parent companies within the Hezardastan Holding, including Cafe Bazaar and Divar, two leading entities in Iran.

Serving as a Site Reliability Engineer in Sotoon's SPAAS team, my contributions were key in the development and upkeep of various database and platform services on a Kubernetes-based cloud infrastructure. I was responsible for extending our service offerings with additional databases and ensuring the smooth operation of all existing services.

Skills and Qualities

Theoretical Background:

Proficient in Machine Learning Theory, Neural Networks, Linear Algebra, and Probability.

Technical Skills:

Highly skilled in C/C++, Go, Python, Bash-Scripting, PHP, JavaScript. Experience with PyTorch, TensorFlow, Django, CSS3, HTML5, and git.

Other Attributes:

Innovative, self-driven, and communicative, with ability to work efficiently both independently and in a team.