ANDISHEH (ELAHE) GHASEMI

Northeastern University, Boston, MA
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PROFESSIONAL SUMMARY

Doctoral Researcher in Computer Science with a strong foundation in algorithms, optimization, and data-driven problem solving. Experienced in developing efficient clustering, scheduling, and graph algorithms, and implementing scalable systems in Python, Java, and React. Published in top venues and passionate about applying algorithmic thinking to real-world engineering challenges.

EDUCATION

Northeastern University *expected May 2027*
PhD in Computer Science
Supervisors: Rajmohan Rajaraman, Mahsa Derakhshan

Université Paris Cité *2023*
M.Sc. in Computer Science
Parisian Master of Research in Computer Science (MPRI)

Sharif University of Technology *2022*
B.Sc. in Computer Science
Department of Mathematical Sciences

PROFESSIONAL EXPERIENCES

Software Engineering Intern Summer 2026
Google Cloud *Seattle, WA*

- Working on PLSA (Product-Led Sales Acceleration), a data-driven platform that leverages customer product usage data, machine learning, and advanced analytics to identify expansion opportunities (upsell/cross-sell) and guide GCP sales efforts
- Onboarding new products into the PLSA platform; conducting research on feature engineering and crafting and validating ML models to generate high-quality Product Qualified Leads (PQLs)
- Improving platform performance, reliability, and analytics; gaining hands-on experience building production ML models and data pipelines

Visiting Graduate Student Fall 2025
Simons Institute, UC Berkeley *Berkeley, CA*

- Participated in research program on algorithmic foundations for emerging computing technologies

Doctoral Researcher Jan 2024 - Present
Supervisors: Rajmohan Rajaraman, Mahsa Derakhshan *Boston, MA*

- Designed and analyzed efficient algorithms for clustering and graph optimization problems
- Applied online learning and stochastic optimization techniques to improve decision-making under uncertainty

Graduate Researcher April - September 2023
Supervisor: Chien-Chung Huang *Paris, France*

- Formulated innovative solutions to address constraints in job scheduling problem.

Undergrad Researcher Sep 2021 Mar 2022
Supervisor: Vincent Jugé *Paris, France*

· Designed and analyzed efficient merging routines, with applications to real-world sorting algorithms like Timsort. Published at ICALP and Algorithmica.

Frontend Developer Intern Summer 2021
Shab Company

· Developed interactive UI components using HTML, CSS, JavaScript, and React
· Collaborated with engineering team to improve user experience and frontend performance

PROJECTS

Algorithm Visualizer Platform
React, TypeScript, SVG, JavaScript

Built interactive web app visualizing 17+ algorithms (sorting, graph search, clustering) with real-time animation, Implemented dynamic graph editor with user-driven node/edge manipulation and visual complexity metrics, Designed educational clustering visualizations (e.g., Pivot) demonstrating streaming and online data processing

Bomberman Multiplayer Game
Java, Swing, Networking, Concurrency

Developed multiplayer network game using custom TCP/IP protocol for real-time interaction, Designed AI enemies with pathfinding and state machine logic; implemented thread-safe synchronization

PUBLICATIONS

- Mahsa Derakhshan, Andisheh Ghasemi, Rajmohan Rajaraman, Omer Wasim, and Tegan Wilson. Competitive Random-Order Correlation k-Clustering. In Submission.
- Mahsa Derakhshan, Andisheh Ghasemi, Calum MacRury. Approximation Algorithms for Action-Reward Query-Commit Matching. *EC* 2026.
- Mahsa Derakhshan, Andisheh Ghasemi, Rajmohan Rajaraman. One-way Communication Complexity of Minimum Vertex Cover in General Graphs. Presented at *ICALP* 2025.
- Elahe Ghasemi, Vincent Jugé, and Ghazal Khalighinezhad, Helia Yazdanyar. Galloping in Fast-Growth Natural Merge Sorts. In *Algorithmica* 2024. Originally presented at *ICALP* 2022.
- Mohammad Rashid, Elahe Ghasemi, and Javad B Ebrahimi. Entropic weighted rank function. In *IWCIT* 2022.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, SQL
Frameworks: React, Node.js, Flask, OR-Tools
Tools: Git, Linux, VSCode, PyCharm

PROFESSIONAL CERTIFICATES

- **IBM Data Science Professional Certificate** – Coursera, *2025* [Verify]
  Comprehensive training in Python, R, SQL, machine learning, and data visualization with hands-on projects.

ACHIEVEMENTS

- 2026 Khoury College PhD Service Award for leadership in organizing the Northeastern Theory Seminar
- Ranked 60th among 148,429 participants in national university entrance examination (Konkour)
- Granted PGSM (Paris Graduate School of Mathematics) scholarship of Fondation Sciences Mathmatiques de Paris

OTHER EXPERIENCES

Theory Group Seminar at Northeastern University Organizer

Teaching Assistant Northeastern University, Sharif University
Algorithms, Automata, Data Structure

Peer Review
APPROX 2023, FOCS 2025, SOSA 2025