

FATEME HASHEMI CHALESHTORI

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INTERESTS

- Natural Language Processing
- Machine Learning and its Applications
- Explainable Artificial Intelligence
- Social Computing

EDUCATION

University of Utah, Salt Lake City, Utah

Ph.D. in Computer Science

Aug. 2022 - Dec. 2027 (expected)

Colorado State University (CSU), Fort Collins, Colorado

Master of Computer Science - Advisor: [Dr. Indrakshi Ray](#)

Thesis: COVID-19 Misinformation on Twitter: The Role of Deceptive Support.

Cumulative GPA: **3.91/4**

Aug. 2019 - May. 2022

PUBLICATIONS AND MANUSCRIPTS

- Zou, C., Hashemi Chaleshtori, Fateme, Shirazi, H., Banerjee R. & Ray, I. (Aug. 2021). "Seeing Should Probably not be Believing: The Role of Deceptive Support in COVID-19 Misinformation on Twitter". Journal of Data and Information Quality.
- Hashemi Chaleshtori, Fateme & Ray, I. (Dec. 2021). "Automation of Vulnerability Information Extraction Using Transformer-Based Models of Natural Language Processing". European Symposium on Research in Computer Security (ESORICS 2022) Workshop on System Security Assurance (SecAssure 2022).
- Rahimi, M., Shirazi, M., NajafGholian, A., Hashemi Chaleshtori, Fateme, Moradi, N., Behzad, K., Roodabeh, S. H., Gavahi, A., Moghadam, F. F., GhaziAsgar, A., AlizadehGharib, Y., Memarian, M., Tavakoli, H. & Khosravi, M. A. "[Parsian 2018 Extended Team Description Paper for RoboCup](#)". International RoboCup Symposium.
- Rahimi, M., Shirazi, M., Arfaee, M., NajafGholian, A., Zamani, A., Hosseini, H., Hashemi Chaleshtori, Fateme, Moradi, N., Ahsani, A., Jafari, M., Zahedi, A., Abdollahi, P. & Khosravi, M. A. "[Parsian 2017 Extended Team Description Paper for RoboCup](#)". International RoboCup Symposium.

RESEARCH EXPERIENCES

KoRe Lab, Research Assistant, University of Utah (Supervisor: [Dr. Marina Kogan](#))

2022

- Studying the correlation between governmental and political decisions concerning COVID-19 crisis.

Rays Cyber Research Lab, Research Assistant, CSU (Supervisor: [Dr. Indrakshi Ray](#))

2020 - 2022

- Working on projects emerging from the intersection of Machine Learning algorithms and Cybersecurity.
- Utilizing state-of-the-art NLP models to process and analyze text from security perspectives, e.g., vulnerability information extraction, misinformation detection in social media such as Twitter, pretraining a domain-specific natural language representation model to better understand the expressions of individuals in social networks, etc.

Parsian Robotics Laboratory, Software Team Member, AUT (Supervisor: [Dr. Mohammad Khosravi](#))

2016 - 2018

- Working on [Small Size Soccer League](#), aiming to design and build SSL robots, compatible with [international RoboCup competition](#) rules as an engineering project.
- One of the oldest RoboCup Soccer leagues focusing on the problem of intelligent multi-agent cooperation and control in a highly dynamic environment with a hybrid centralized/distributed system.
- Combining knowledge of mechanics, electronics, and artificial intelligence, targeting the ideal cooperation between the SSL robots to perform a soccer game.

ON-GOING RESEARCH PROJECTS

- **Incorporating Author's Stance in Similarity-based Misinformation Detection in Social Media**

Supervisors: Dr. Indrakshi Ray and [Dr. Ritweek Banerjee](#)

As little variations in text with negligible effect on similarity scores can flip the author's stance against the claim made in a piece of information, we exploit this stance in our misinformation detection pipeline. We also pre-train a domain-specific Transformer model on a huge collected COVID-19 Twitter dataset for this project.

- **Topic-oriented Tempo-Spatial Analysis of COVID-19 Tweets**

Supervisor: Dr. Indrakshi Ray

We publish a dataset with our analytic topical results based on temporal and geographic information in [SUSTAIN data visualization framework](#). Such analysis highlights the importance of information threads for other researchers, governments, and health organizations.

TEACHING AND MENTORING EXPERIENCES

- Mentor, [i-STEM Scholar for 1st-generation, low-income, and underrepresented young students](#) Summer 2021
- Mentor, Ten undergraduate students working on NLP projects, CSU 2021
- Graduate Teaching Assistant for [System Security course](#), CSU Fall 2021
- Graduate Teaching Assistant for [Introduction to Programming with Python course](#), CSU Spring 2020
- Graduate Teaching Assistant for [Parallel Programming course](#), CSU Fall 2019
- Head Teaching Assistant for [Principles of Programming course](#), AUT Fall 2015, Fall 2016
- Teaching Assistant for Data Structure and Algorithms course, AUT Fall 2016

PROFESSIONAL SERVICES

- Reviewer, Conference on Data and Application Security and Privacy 2022
- Reviewer, IEEE Transactions on Power Systems 2021
- Reviewer, Australasian Conference on Information Security and Privacy 2021
- Reviewer, The Web Conference 2021 & 2022
- President, [Women in CyberSecurity chapter at Colorado State University](#) 2021-2022
- Lecturer, C Programming Workshop, 9th AUT [Linux and Open Source Software Festival](#) 2017

HONORS AND AWARDS

- Graduate Student Fellowship** 2022 - 2023
School of Computing, University of Utah, Salt Lake City, UT, USA
- Student Scholarship, ACM Richard Tapia Celebration of Diversity in Computing** 2022
Washington, D.C.
- Fully-funded Research Assistantship** 2020
Department of Computer Science, Colorado State University, Fort Collins, CO, USA
- Ranked 4th with Parsian Robotics Group in RoboCup Competitions** 2017
[Small Size Soccer League](#), Nagoya, Japan
- Gained 3rd Place with Parsian Robotics Group in IranOpen Robotics Competitions** 2017
[Small Size Soccer League](#), Tehran, Iran
- Ranked top 0.8%, Nationwide University Entrance Exam** 2014
Among Approximately 222,500 Participants in Mathematics and Physics Field

TECHNICAL SKILLS

Programming:

Python, C/C++, Java, CUDA, OpenMP, MPI, VHDL, Verilog, Bash, Assembly

Frameworks & Scientific Tools:

Git, Robotic Operating Systems (ROS), Qt, Octave, MATLAB, Arduino IDE

REFERENCES

Available upon request.