

# Fateme Hashemi Chaleshtori

✉ fateme.hashemi@utah.edu    🌐 <https://fateme-hshm96.github.io/>

🎓 Kahlert School of Computing, University of Utah    🏠 Salt Lake City, UT 84112

## PROFESSIONAL SUMMARY

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Third-year Ph.D. student in Computer Science specializing in NLP, LLMs, Interpretability, and Explainable AI (XAI). Focused on bridging academic research with real-world AI applications, developing frameworks that enhance transparency and improve human-AI collaboration. Committed to translating complex research into actionable technologies that address critical challenges and build trust in AI systems.

## EDUCATION

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**Third-year Ph.D in Computer Science** Aug. 2022 - Dec. 2027 (expected)

University of Utah (UofU), Salt Lake City, Utah - Advisor: Dr. Ana Marasović

**M.S. in Computer Science** Aug. 2019 - May 2022

Colorado State University (CSU), Fort Collins, Colorado - Advisor: Dr. Indrakshi Ray

CGPA: 3.91/4

**B.Sc. in Computer Engineering** Sep. 2014 - Jun. 2019

Amirkabir University of Technology (AUT), Tehran, Iran - Advisor: Dr. Maryam Amir Haeri

CGPA: 3.56/4

## RESEARCH EXPERIENCES

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**Ananas Lab.**, Research Assistant, UofU (Supervisor: Dr. Ana Marasović) Jan. 2023 - present

- ◇ Developing benchmark tasks and specialized foundation models for legal text analysis, improving the efficiency of AI applications in legal practices.
- ◇ Examining the faithfulness of Chain-of-Thoughts in LLMs beyond merely intervening with inputs and outputs.
- ◇ Developing a framework to predict model errors and communicate its limitations, improving model transparency and user trust in AI-driven applications.
- ◇ Reevaluated approaches for assessing the effectiveness of explanations in human-AI collaboration, suggesting deferral setups to partner experts and AI, resulting in an 88% reduction in expert time.

**KoRe Lab.**, Research Assistant, UofU (Supervisor: Dr. Marina Kogan) Aug. 2022 - Dec. 2022

- ◇ Developed a data-driven analysis framework to assess the impact of political decisions on public health during the COVID-19 crisis, enabling better decision-making for policy advisors.

**Rays Cyber Research Lab.**, Research Assistant, CSU (Supervisor: Dr. Indrakshi Ray) Jun. 2020 - Jun. 2022

- ◇ Developed a pipeline for real-time claim assessment in COVID-19 tweets, aimed at combating misinformation and enhancing the credibility of social media platforms.
- ◇ Designed and developed a novel three-stage process for analyzing COVID-19-related tweets by identifying check-worthy claims, determining the verification focus, and assessing the author's stance, enhancing fact-checking and opinion mining in a noisy social media environment.
- ◇ Implemented a Transformer-based NLP solution to extract security-related terms from vulnerability descriptions, enhancing automated security analysis for large-scale systems

**Parsian Robotics Lab.**, Software Team Member, AUT (Supervisor: Dr. Mohammad Khosravi) Jan. 2016 - Aug. 2018

- ◇ Developed software for [Small Size Soccer League](#) robots aligning with [international RoboCup competition](#) rules, to enable intelligent multi-agent cooperation and control in a dynamic environment using a hybrid centralized/distributed system, integrating mechanics, electronics, and artificial intelligence for optimal soccer game performance.

## TECHNICAL SKILLS

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

**Frameworks & Scientific Tools:** HuggingFace libraries (Transformers, Accelerate, ...), Pytorch, DeepSpeed, Git, Robotic Operating Systems (ROS), MATLAB, Qt

## PUBLICATIONS

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### On Evaluating Explanation Utility for Human-AI Decision Making in NLP

Hashemi Chaleshtori, Fateme, Ghosal, A., Gill, A., Bambroo, P. & Marasović, A. (Jul. 2024). In Findings of the Association for Computational Linguistics: EMNLP 2024 (Poster)

### Claim Extraction and Dynamic Stance Detection in COVID-19 Tweets

Salek Faramarzi, N.\*, Hashemi Chaleshtori, Fateme\*, Shirazi, H., Banerjee, R. & Ray, I. (Apr. 2023). - Companion Proceedings of the ACM Web Conference. (\*equal contribution)

### Seeing Should Probably not be Believing: The Role of Deceptive Support in COVID-19 Misinformation on Twitter

Zou, C., Hashemi Chaleshtori, Fateme, Shirazi, H., Banerjee R. & Ray, I. - Journal of Data and Information Quality.

### Automation of Vulnerability Information Extraction Using Transformer-Based Models of Natural Language Processing

Hashemi Chaleshtori, Fateme & Ray, I. - European Symposium on Research in Computer Security Workshop on System Security Assurance (SecAssure 2022).

Parsian 2018 and 2017 Extended Team Description Paper for RoboCup International RoboCup Symposium.

## HONORS AND AWARDS

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### Graduate Student Fellowship

School of Computing, University of Utah, Salt Lake City, UT, USA

Aug. 2022 - May 2023

### Student Scholarship, ACM Richard Tapia Celebration of Diversity in Computing

Washington, D.C.

Sep. 2022

### Ranked 4<sup>th</sup> with Parsian Robotics Group in the international RoboCup Competitions

Small Size Soccer League, Nagoya, Japan

Jul. 2017

### Gained 3<sup>rd</sup> Place with Parsian Robotics Group in IranOpen Robotics Competitions

Small Size Soccer League, Tehran, Iran

Apr. 2017

## TEACHING AND MENTORING EXPERIENCES

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Mentor, i-STEM Scholar for 1<sup>st</sup>-generation, low-income, and underrepresented young students

Summer 2021

Mentor, 10 undergraduate students working on different NLP projects, CSU

Spring 2021 - Summer 2022

Teaching Assistant:

◇ Natural Language Processing, UofU

Fall 2024

◇ Parallel Programming, CSU

Fall 2019

◇ System Security, CSU

Fall 2021

◇ Data Structure and Algorithms, AUT

Fall 2016

◇ Intro. to Python Programming, CSU

Spring 2020

◇ Principles of Programming, AUT

Fall 2015 & 2016

## PROFESSIONAL SERVICES

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Reviewer, Conference on Data and Application Security and Privacy

2022

Reviewer, The Web Conference

2021 & 2022

Reviewer, IEEE Transactions on Power Systems

2021

Reviewer, Australasian Conference on Information Security and Privacy

2021

Lecturer, C Programming Workshop, 9th AUT Linux and Open Source Software Festival

2017

## LEADERSHIPS

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President, Women in Cyber-Security chapter at Colorado State University

2021 - 2022

◇ Led chapter as President, growing membership by 35% and organizing networking events

◇ Developed strategic initiatives to support women in technology and cybersecurity careers

Treasurer, Iranian Student Organization, CSU

2021

Executive Member, Amirkabir Robotics & A.I. Technology Festival (AUTCUP)

2016

Elected as a Member of Students' Union, Dept. of Computer Engineering, AUT

2015