MARYAM ABBASI HAFSHEJANI

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Education

Jan 2023–present **PhD student in Computer Science** , *Texas University at San Antonio (UTSA)* , TX, USA
GPA : 4/4

2018–2021 **MSc in Computer Engineering - Software** , *Isfahan University of Technology (IUT)* , Isfahan, Iran
Thesis Title: Analyze and design effective incentives to improve the throughput of Algorand Blockchain. **Cumulative GPA:** (4/4). **Ranked 1st** based on Cumulative GPA.

2013–2017 **BSc in Computer Engineering - Software** , *Shahrekord University*, Shahrekord, Iran
Ranked 2nd based on Cumulative GPA.

Publications and projects

2024 **VoiceRadar: Voice Deepfake Detection using Micro-Frequency and Compositional Analysis**, *NDSS 2025 (accepted)*
Used Technologies: Deep Learning, Text to speech, Voice conversion.

2024 **Vertical Federated Learning Spiking Neural Networks**, *Under review*
Used Technologies: Deep Learning (MobileNet,ResNet,VGG9), Spike Spiking neural networks, Vertical Federated Learning

2023 **OverHear: Headphone based Multi-sensor Keystroke Inference** , *Under review*
Used Technologies: Machine Learning (Random Forest classifier, Decision Tree,Decision Tree classifier),Deep Learning.

2023 **Detecting and Punishing Selfish Behavior during Gossiping in Algorand Blockchain**, *Virtual IEEE Conference on Communications 2023 (VCC)*,
Description:Simulation of selfish behavior attacks on the Algorand blockchain using JAVA. The project proposes a role-based approach to detect and penalize selfish nodes in Algorand, supported by a thorough game-theoretic analysis and mechanism design **Used Technologies**: JAVA

2022 **On Algorand Transaction Fee: Challenges and Mechanism Design**, IEEE International Conference on Communications (ICC)
Simulation of the Algorand blockchain and examination of Sybil and flooding attacks (by generating and distributing empty blocks to the blockchain) using JAVA. Additionally, the project involves designing a perfectly competitive market and proposing an algorithm for computing optimal transaction fees and block size.

2024 **Multi-Label Tuberculosis Drug Resistance Prediction using Deep Metric Learning**, Deep learning course project

Academic Experience

Jun 2023-Present **Graduate Research Assistance at Security- Privacy-Trust and Ethics in Computing Laboratory (SPriTLab)**, *University of Texas at San Antonio*, USA

Oct 2018 - Feb 2021 **Graduate Research Assistance at Game Theory and Mechanism Design Research Laboratory (GTMD)** , *Isfahan University of Technology*, Isfahan, Iran

Fall 2017 **Teaching Assistance** , *Signals and Systems*, Shahrekord University, Shahrekord, Iran

Technical Skills

AI:	Generative AI, Generative Adversarial Network, Machine learning, Deep learning,Federated Learning,Large Language Models, Natural language processing
Programming Languages	Python, C++, Solidity,JAVA
Database	Microsoft SQL Server
Others	Git
Operating Systems	Windows, Linux

References

1. **Murtuza Jadliwala**, *Department of Computer Science* , University of Texas at San Antonio— Associate Professor and Cloud Technology Endowed Fellow , Email:murtuza.jadliwala@utsa.edu
2. **Mohammad Hossein Manshaei**, *Department of Electrical and Computer Engineering* , University of Arizona— Research Assistant Professor , Email:manshaei@gmail.com