Marzieh Bitaab

mbitaab@asu.edu | https://mbitaab.github.io | https://linkedin.com/in/marzieh-bitaab

RESEARCH INTERESTS

My research interests are:

Applied Machine Learning	**Cybersecurity**
Deep Learning	**Natural Language Processing**

EDUCATION

Arizona State University   **Spring 2020 - 2023**
PhD, Computer Science   *Tempe, AZ*
- **4.0/4.0** GPA
- Funded by **SEFCOM Lab**

Shiraz University   **2015 - 2018**
MSc, Computer Science, Cybersecurity   *Shiraz, Iran*
- **4.0/4.0** GPA

Shiraz University   **2011 - 2015**
BSc, Computer Science, Software Engineering   *Shiraz, Iran*
- **3.57/4.0** GPA

TECHNICAL SKILLS

Skills: Data analysis using Python, PyTorch, Tensorflow, Keras, Numpy, Scikit, and Pandas
Experiences: Matlab, Kotlin, and JAVA.

EXPERIENCE SUMMARY

Machine Learning Engineering Intern   **2022**
Palo Alto Networks – Remote
- Designed and implemented machine learning model for detecting malicious websites
- Created data pipeline to automatically collect data from various sources
- Analyzed machine learning and deep learning models and fine-tuned according to the problem setting

Programming Competition Director   **2020-2021**
Women in Computer Science at ASU (WiCS: http://wics-asu.org)
- Organized the annual WiCS programming competition
- Designed programming challenges and test cases for the programming competition
- Managed volunteers for the programming competition

Parsi GLUE   **2020**
Allen Institute for AI - Remote
- Participated in a project for creating benchmark datasets/models for the Persian language
- Annotated data for training NLP models for different tasks
- Programmed a crawler to collect question answering data from Persian forums automatically

Open-Source Electrophysiological Toolbox (OSET)   **2015-2016**
Shiraz University, Iran
- Created a website for users to share their codes related to biological signal generation, modeling, and processing
- Added a full wiki for explaining shared codes

SELECTED PROJECTS

Hand Gesture Detection   2021
- Created an Android application to detect hand gestures through the camera
- Coded a server to receive the gesture video for analysis and detection
- Designed and trained a Convolutional Neural Network (CNN) to detect hand gestures based on video frames

Active Scam Detection Based on Social Media Data   2020
- Crawled social media websites to gather information about scam websites
- Trained a scam detection model based on social media data to detect malicious websites
- Deployed a scam detection model on Reddit website as a bot on /r/scams ([about bot](#))

Analyzing COVID-19 related Scam Domains   2020
- Coded a crawler to automatically gather news, URLs, and DNS records from different sources
- Analyzed the collected data to find trends on COVID-related scam domains
- Investigated the attackers' activities during the COVID-19 pandemic

Voice-guided Grocery Shopping via Google Assistant   2019
- Crawled commonly used coupons website to get deals and prices on different grocery items
- Built a Google Assistant-based application to shop for groceries using voice commands

Question Tag Detection   2018
- Trained different machine learning models to detect Stack Overflow-like question tags

PUBLICATIONS (Google Scholar: [Marzieh Bitaab - Google Scholar](#))

Detecting Scam Websites at Scale   under review
Marzieh Bitaab, Haehyun Cho, Adam Oest, Rana Pourmohamad, Tiffany Bao, Ruoyu "Fish" Wang, Yan Shoshitaishvili, Adam Doupe

Scam Pandemic: How Attackers Exploit Public Fear through Phishing   eCrime'20
Marzieh Bitaab, Haehyun Cho, Adam Oest, Penghui Zhang, Zhibo Sun, Rana Pourmohamad, Doowon Kim, Tiffany Bao, Ruoyu Wang, Yan Shoshitaishvili, Adam Doupé, Gail-Joon Ahn

Parsinlu: a suite of language understanding challenges for persian   TACL
Daniel Khashabi, Arman Cohan, Siamak Shakeri, Pedram Hosseini, Pouya Pezeshkpour, Malihe Alikhani, Moin Aminnaseri, **Marzieh Bitaab**, et al.

Hybrid Intrusion Detection: Combining Decision Tree and Gaussian Mixture Model   ISCISC'17
Marzieh Bitaab, Sattar Hashemi

HONORS AND AWARDS

Grace Hopper Celebration Student Scholarship   2021
Offered in recognition of academic and technical achievements

Invited Speaker at the FTC's PrivacyCon'21   2021
Presented the effects of the COVID-19 pandemic on the rise of malicious websites

Knowledge Mobilization Award Finalist   2021
Offered in recognition of extraordinary academic achievements

Awarded WiML funding for the ICML conference registration   2020
Offered in recognition of extraordinary academic and technical achievements

Winner of Sunhacks Hackathon 2019
Our team won the second place by building a voice-guided application for easy grocery shopping

Top 10% Among Graduate Cybersecurity Students 2018
Offered in recognition of extraordinary academic achievements

Top 10% Among KDD challenge participants 2016
Trained an ensemble of machine learning models for detecting affiliation ranking based on scholars' data

EXTRACURRICULAR ACTIVITIES

Teacher Assistant for CSE 545	2021
Grace Hopper Celebration Privacy and Security Committee Member	2021
Reviewer at the Computer and Security Journal	2021
Teacher Assistant for CSE 365	2020