Sahar Zargarzadeh
Computer science PhD student

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OBJECTIVE

To apply my Ph.D. research expertise and 5+ years of software development experience to data-driven projects. With a strong foundation in AI and modern techniques such as deep learning and Generative adversarial network, I seek to uncover actionable insights and develop predictive models that deliver measurable business results.

ACADEMIC EXPERIENCE

Design a Power Consumption ML Backdoor Attack in the Spirit of Mirai *for IoT devices*   **Aug 2023 – Present**
- Pioneered a neural adversarial attack strategy targeting AI model vulnerabilities in Deep Learning power side channel classifiers for IoT devices.
- Utilized GANs to generate variations of dummy code in Mirai-infected IoT devices, altering power consumption patterns to cause misclassification and enable a 96% efficient model hijacking process.

Beamforming oriented topology control for mm-Wave networks   **Jan 2022 – Jun 2023**
- Developed predictive models for RX throughput in mm-wave systems using supervised learning, simulating Beamforming channels with feature engineering, and optimizing base station power, improving performance by 89%.

Cooperative spectrum sensing technique CR-VANET   **May 2018 – Sep 2019**
- Designed a data-driven consensus algorithm to boost spectrum sensing accuracy by 98%, using advanced statistics and machine learning to optimize band detection and reduce spectrum handoffs.

PROFESSIONAL EXPERIENCE

Jumbula Company Online Registration (ideal for camps, and classes) – Data Science Developer   **Jul 2019 – Sep 2021**
- Designed a data-driven online registration system using ASP.NET Core and SQL Server. Applied machine learning to analyze user behavior, such as registration patterns, and forecast trends in enrollment and course demand, improving reporting accuracy and resource allocation.

Panaone Company High-Speed Internet and communication – Software Developer   **Mar 2017 – Jul 2019**
- Integrated customer service processes using Process Maker, applying data analytics and machine learning to achieve 92% system integration with a C# and SQL Server backend, enhancing decision-making and efficiency.

EDUCATION

- **Ph.D. *of Engineering, Major in* Computer Science (Machine learning)**   GPA: 4/4.00
  University of Texas Arlington, TX   **Jan 2022- Present**
- ***Master and Bachelor of Engineering, Major in* Computer Science (Computer Networks)**   GPA: 3.89/4.00
  University of Isfahan, Iran   **Sep 2012 - Sep 2019**

PUBLICATIONS

- Sahar Zargarzadeh, Efat Fathalla, Chunsheng Xin, Hongyi Wu, "Beam Profiling and Beamforming Modeling for mmWave NextG Networks", 2023 ICCCN, USA.
- Sahar Zargarzadeh, N. Moghim, B. Shahgholi "A new cooperative spectrum sensing technique for CR-VANET using data aggregation algorithms", 2020 Elsevier Vehicular Communications, USA.
- Sahar Zargarzadeh, F. NasiriMofakham, M. Bagheri "A Trilateral Cross-Cultural e-Negotiation System", 2016 1st International Conference on Transfer of Knowledge Among Iran, France, Germany, Isfahan, Iran.

SOFTWARE SKILLS

- **Languages:** C#, Python, Java, SQL, MySQL, jQuery, AngularJS.
- **Deployment**: .NET 8, Visual Studio, Google Collab.
- **Databases & Frameworks:** SQL Server, MongoDB, Git, Docker.

INVITED TALKS

- Student Computing Research Festival in PhD lighting talks SCRF PhD Lightning Talks   Feb 2024
- PhD lighting talks at the 50th Anniversary of Computer Department CSE 50th Anniversary PhD Talks   Sep 2023

CERTIFICATES

- Docker Foundation Professional Certificate   Sep 2024
- Develop Advanced AI applications with Python   Aug 2024
- Azure Machine Learning Development Certificate   Aug 2023
- Explore a Career in Machine Learning Engineering Learning Path Certificate   July 2023