SAJAD DADGAR

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Skills

- **Programming Languages:** Python, Java, SQL, JS, C/C++, Matlab
- **Libraries:** PyTorch, TensorFlow, Keras, Numpy, Pandas, Scikit-Learn, NLTK, OpenCV
- **AI & ML Skills:** Machine Learning, Foundation Models, LLMs, Deep Learning, XGBoost, NLP, Computer Vision
- **Databases:** PostgreSQL, MySQL, MongoDB, Oracle
- **Web Technologies:** Django, Spring, Node.js, HTML, CSS, JavaScript, jQuery, React
- **Cloud Technologies:** Amazon AWS
- **Environments and Tools:** Linux (Ubuntu), Windows, Git, Docker, Postman
- **Soft Skills:** Problem-Solving, Team Work, Communication, Leadership, Project Management, Self-Learning

Education

University of Calgary, M.Sc. in Computer Science 2023 – 2025
- **GPA:** 4.0 / 4.0
- **Thesis:** Developed a novel policy mining approach from incomplete access logs, using MaxSAT to extract DTE policies for improved explainability and reliability, and GNNs to enhance efficiency and scalability.

Amir Kabir University of Technology, B.Sc. in Computer Science 2016 - 2021
- GPA: 3.75/4.0
- **Thesis:** Identify misinformation about Covid-19 on social media.

Work Experience

AI Researcher, Cybersecurity Research lab in UofC, Canada Sep 2023 – Jul 2025
- Developed a novel policy mining approach using MaxSAT to extract interpretable DTE access control policies from incomplete logs, enhancing both explainability and decision reliability.
- Leveraged GNNs to accelerate policy extraction, improving computational efficiency.
- Conducted comprehensive experiments to evaluate the performance of our approach in terms of running time, generalization, and scalability with benchmark datasets.
- Authored a research papers currently accepted at a conference (ESORICS 2025).

Research Assistant, Remote, University of South Australia Jul 2021 – Mar 2022
- Conducted comprehensive research in Deep Learning, Computer Vision, NLP, and Explainable AI.
- Published two papers as the first author.

Software Engineer Intern, Rahnema Company, Iran Jul 2019 – Sep 2019
- Three months of learning and developing a mobile application using Spring, React Native, and etc.

Teaching Experience

Explorations in Artificial Intelligence and Machine Learning - UofC May 2025 - Jul 2025
Introduction to Software Engineering - UofC Sep 2024 - May 2025
Techniques for Numerical Computation - UofC Jan 2024 - May 2024
Web-Based Systems - UofC Aug 2023 - May 2024
Artificial Intelligence - AUT Feb 2021 - Jul 2021

Projects

Engagehub: AI-Enhanced Public Engagement System Mar 2025
- Achieved 4th place in the Urban Systems hackathon by developing an AI-powered survey platform with voice input and LLM-based chatbot for real-time feedback analysis using NLP, speech-to-text, and web scraping.

- Implemented with Python, Django, Streamlit, web scraping, and Gemini (RAG with scraped data)

Hackathon - Foreign Affairs Data Visualization Dec 2023
- Developed a data visualization project for a CANIS Data Visualization and Foreign Interference hackathon, focusing on extracting and visualizing data related to Chinese media influence on the Canadian government.

MFCC Speech Recognition Jun 2020
- Implemented a speech recognition system for the "Deep Learning" course project using MFCC and CNNs. The project involved developing various models and processing audio data to enhance recognition accuracy.

Image Reconstruction via Hopfield Networks May 2020
- Implemented Hopfield Networks from scratch to effectively reconstruct incomplete images by iteratively converging to stored patterns, demonstrating robust associative memory capabilities.

Call of Typing – Website for Typing Competition Jun 2020
- Developed a typing competition website enabling users to enhance typing and listening skills through text and audio exercises, with features like profile customization, group contests, and a dynamic ranking system.
- Technologies: Django, Python, MySQL, HTML, CSS, JavaScript, JQuery.

Cando- Mobile Application for Auction Sep 2019
- Developed a mobile app for auction with Spring and React Native, featuring live auction bidding, user account management, and real-time notifications for an engaging user experience.

Data Analyzing of Digikala's Dataset (Amirkabir Data Mining Cup 2018) Jul 2019
- Conducted data analysis for Digikala to extract insights and identify trends, supporting strategy refinement to boost popularity and market presence.

Desktop Education Portal Mar 2018
- Developed a desktop application for students, enabling them to enroll in courses and access various functionalities similarlar to university portals, streamlining their academic activities and administrative tasks.

Publications

- Dadgar, S., & Prof. Fong, P. (2025). **Mining Attributed DTE Policies**. (Accepted at ESORICS conference)
- Dadgar, S., & Dr. Neshat, M. (2025). **Technical report of the machine learning methods application for wave energy prediction**. (Accepted at SDEWES conference)
- Dadgar, S., & Dr. Neshat, M. (2022). **A Novel Hybrid Multi-Modal Deep Learning for Detecting Hashtag Incongruity on Social Media**. (Published by Sensors Journal). *doi.org/10.3390/s22249870*
- Dadgar, S., & Dr. Neshat, M. (2022). **Comparative Hybrid Deep Convolutional Learning Framework with Transfer Learning for Diagnosis of Lung Cancer**. (Accepted at SoCPaR conference, Published by Springer) *doi.org/10.1007/978-3-031-27524-1_28*
- Dadgar, S., & Prof. Ghatee, M. (2021). **Checkovid: A COVID-19 Misinformation Detection System on Twitter Using Network and Content Mining Perspective**. *doi.org/10.48550/arXiv.2107.09768*

Awards and Achievements

International Graduate Tuition Award (IGTA) Jul 2023
International Graduate Recruitment Award (IGRA) Jun 2023
Ranked top 0.1% in Iran's B.Sc. University Entrance Exam. Jun 2016

Certificates

Introduction to Data Engineering - Coursera Jun 2025
Generative AI with Large Language Models - Coursera Jun 2025
Machine Learning - Stanford University - Coursera Oct 2020
Deep Learning A-Z™: Hands-On Artificial Neural Networks - Udemy Sep 2020
Machine Learning A-Z™: Hands-On Python in Data Science - Udemy May 2020

Volunteering

Vice President of Finance - *Computer Science Graduate Society (CSGS)* May 2024 - May 2025
Head of Informatics and Contests of Students' Scientific Association - AUT Mar 2018 - Mar 2019