

EDUCATION

University of Arizona

Master of Science in Computer Science

2021

Doctor of Philosophy (PhD) in Systems and Industrial Engineering

Aug 2022

Master of Science in Systems and Industrial Engineering

2018

Isfahan University of Technology

Bachelor of Science in Industrial Engineering

2015

TECHNICAL STRENGTHS

Computer Programming

Python, Java, Scala, C++, C, PERL, R, Prolog, SQL, HTML, CSS, JavaScript

Software & Tools

Docker, MIFlow, Tableau, Unix, Git, Scikit-learn, NLTK, spaCy, LaTeX, Jira

Deep Learning Frameworks

PyTorch, TensorFlow, DyNet, Keras

RELEVANT COURSES

Design and Analysis of Algorithms, Algorithms for Natural Language Processing, Neural Networks, Applications of Machine Learning, Principles of Machine Learning, Artificial Intelligence for Health and Medicine, Text Retrieval And Web Search, Computational Linguistics, Software Engineering, Advanced Operating Systems, Engineering Statistics, Fundamentals of Optimization, Stochastic Modeling, Applied Cyberinfrastructure, Enterprise Data Management, Advanced Business Consulting

WORK EXPERIENCE

Graduate Research Assistant, University of Arizona - Question Answering System *August 2019 - Present*

- Utilize Computer Vision (CV) approaches to solve Natural Language Processing (NLP) problems, such as the automatic augmentation of images from the web to enhance results of textual question answering problem.
- Design multimodal information by utilizing transformer models (i.e., BERT), object detection models (i.e., R-CNN), and CNN models (e.g., ResNet, VGG) for the textual question-answering task.

Data Science Research Intern, RedShred

March 2021 - August 2021

- Machine learning and deep learning models were researched, analyzed, developed, tested, and deployed. Information extraction, natural language processing, and other text analysis methods, as well as computer vision techniques, have all been parts of these methodologies.

Teaching Assistant, University of Arizona

January 2019 - May 2020

- Courses: Introduction to Engineering Probability and Statistics, as well as a Survey of Optimization Methods.

Graduate Research Assistant, University of Arizona - Machine Dialog System

May 2018 - August 2019

- Natural language processing (NLP) techniques were used to create a smartphone app that can conduct a meaningful conversation with the user by simulating human talks. The project's data was based on real-world events, such as personal life and relationship experiences, as well as desires, hopes, and dreams.

Graduate Research Assistant, University of Arizona - ML for Health Care

August 2016 - May 2018

- Used data analytics and Machine Learning (ML) approaches (e.g., MLP, Random Forest, SVM, voting, and bagging) to explore relationships between physiological parameters of patients with traumatic brain injury.

Student Consultant, Tucson International Airport

August 2016 - January 2017

- This economic impact assessment was conducted on Tucson International Airport (TUS).
- To develop a business plan for improving TUS's business processes and boosting the city's economic growth, data from all airport tenants and connected businesses was gathered and examined.

Teaching Assistant, Isfahan University of Technology

January 2014 - May 2015

- Courses: Operations Research and Project Control.

PROJECTS

Music Generator

January 2020 - May 2020

- Deep neural networks were used to create a music creation tool that automatically generates, extends, and stylizes imported MIDI music compositions.

- For this project, Amazon Online Services (AWS) servers were used to create a web user interface.

Mental State of Tweeter

August 2019 - December 2019

- For the mental State of Tweeter task, deep recurrent neural networks and transformer networks were used to create a multi-label classification model. The designed model placed in the top ten in the CodaLab competition.

Recognizing Textual Entailment on SNLI Corpus

January 2019 - May 2019

- The Stanford Natural Language Inference (SNLI) challenge was solved using simple but fast machine learning models (Naive Bayes) that produced results similar to deep learning network models.

Implementation of Log-File System on Virtual Flash Drive

January 2019 - May 2019

- A Log-Structured File System (in Linux) was implemented on a virtual flash drive using the C programming language.

Domain Adaptation in Reading Comprehension

August 2018 - December 2018

- Applied Domain Adaptation, LSTM, BiRNN, GRU, FFN, and Attention unites using PyTorch framework to solve the SQUAD Question Answering task.

Programming Distribution Maps for Butterfly Species

August 2017 - December 2017

- Completed a collaborative project with 12 team members to collect and visualize the distribution and monthly migration maps for 700 North American Butterfly species in an agile context.
- Used University of Arizona High-Performance Computing (HPC) servers, Docker, and Singularity Containers.

Design and Implementation of a Web-Based Database Application

August 2017 - December 2017

- Worked on the front-end and back-end of a database system that can assist a school class management with its day-to-day operations and decision-making.
- The database system was built using Oracle SQL Server and web-based development tools.

PROFESSIONAL AND PERSONAL DEVELOPMENTS

Manager of the international students' sports activities club (ICAT) at the University of Arizona.	Current
Manager of UA's Computational Medicine and Informatics for Neurological Health (COM-IN) Lab.	2018
Completed Six Sigma Green Belt training and Primavera Project Management certification.	2016
Second place was earned. In the state tournament for the college basketball championship, Isfahan, IR.	2014