Sina Ehsani - sinaehsani@email.arizona.edu - (+1) 310 874 6216
github.com/sina-ehsani - linkedin.com/in/sina-ehsani - sina-ehsani.github.io

EDUCATION

University of Arizona
Master of Science in Computer Science *2022*
Doctor of Philosophy (PhD) in Systems and Industrial Engineering *Dec 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, MlFlow, Tableau, Unix, Git, Scikit-learn, NLTK, spaCy, LaTeX, Jira
Deep Learning Frameworks	PyTorch, HuggingFace, TensorFlow, DyNet, Keras, PyTorch Lightning

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 Cyberinfrastruc, Enterprise Data Management, Advanced Business Consulting

WORK EXPERIENCE

Research Intern, Truveta *May 2022 - Present*

· Building and developing NLP models on medical text data to further the company's vision of Saving Lives with Data.

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.
· For the textual question-answering task, multimodal information is designed using transformer networks (e.g., BERT), object detection models (e.g., Faster RCNN), and CNN models (e.g., ResNet).

Data Science Research Intern, RedShred *March 2021 - August 2021, Jan 2022 - May 2022*

· Developed and deployed a start-to-finish plot-processing model on the RedShred API, allowing for the automatic read and processing of various types of plots found in PDF documents.
· The system was composed of numerous components, including object detection models, text extraction and identification, and it was capable of SOTA on the field, correctly identifying the data 69.12 percent of the time.

Teaching Assistant, University of Arizona *January 2019 - Jan 2021*

· Courses: Introduction to Engineering Probability and Statistics, Survey of Optimization Methods, and Statistical Quality Control.

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 in the state tournament for the college basketball championship, Isfahan, IR.	2014