Mory Gharasuie

Phd Candidate

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Work Experience

Research and Teaching Assistant

Aug 2019 - Present

Old Dominion University | Norfolk, USA

• Research Assistantship
  ◦ Developing applications for mobile and serverless domains by leveraging machine /Deep learningL and computer vision for surveillance camera (increasing scalability for edge-computing).
  ◦ Doing research on AI/ML model for Improving the performance (accuracy) on classification problems for tabular data in SSL setting including deep networks, transformer networks, Autoencoders and so on.
  ◦ Research on mitigating the impact of bias in imbalanced data in training ML and DL models in Image and tabular domains for purpose improving accuracy on rare classes in classification problem.
• Teaching Assistantship
  ◦ Programming with C/C++ and Java (CS150, CS250, CS251)
    ▪ Teaching Labs and recitations
    ▪ assignment Development
    ▪ Grading

AI Developer

Jun 2024 - Aug 2024

Medical Aid | Norfolk, USA

• Collaboration in Developing a ChatBot utilizing Large Language Models (LLMs) and Retrieval-Augmented Generativon.
• Medical data extraction with reference to papers or resource
• Presentation of results based on standard medical format
• Providing relevant questions or considerations from recent papers for better diagnosis

Head of Software Develoment

Feb 2013 - Jul 2019

Royan Communication Company | Qom, Iran

• Developing websites for small and medium-sized enterprises.
• Customizing web-based administration interfaces for applications on Linux server machine (such as chat server, FreeRadius server, and Elastix).
• Enhancing the panels with support for multiple languages and designing them to be more intuitive and user-friendly, tailored to meet the specific needs and preferences of the customers.

Projects

Exercise Performance Monitoring

Present

Developed a smartphone-based system that uses pose estimation to track movements during weight training. The system detects repetitions, analyzes range of motion, duration, and velocity, and assesses fatigue by tracking variations in rest times.

Hand Gesture Recognition

Jan 2012 - Jan 2013

Designed a video processing system to recognize numbers written in mid-air using Hidden Markov Models with 85% accuracy. Implemented motion tracking with Kalman filters, trajectory segmentation, background subtraction, and

action recognition techniques.

Video Analytics System

Sep 2019 - Aug 2020

Built an object detection and tracking pipeline for mobile edge cloud computing (MECC). Integrated object detection and tracking into a unified framework with a graphical interface for real-time video processing. Popular deep learning models for object detection is used in this work.

Data Science and Machine Learning Projects

Jun 2024 - Present

Created and managed a repository featuring data science and machine learning projects. These projects involve working with various datasets, and machine learning algorithms from traditional to STOA. The repository includes:

- Data preprocessing
- Exploring data analytics (EDA)
- Feature engineering and selection
- Machine learning development and evaluation (Deep and Convolutional Neural networks, Decision-Tree based models, Regression, Recommendation models, etc)
- Data visualization, interpretation

Core Skills

Java, C++, C#, HTML, Keras, PyTorch, OpenCV, Scikit-learn, HuggingFace, Pandas, Matplotlib, Seaborn, Dask, Flask, Git, Docker, AWS, SageMaker, Windows, Linux, Windows, Python, Machine Learning, Image Processing, Computer Vision, Deep Learning, Tensorflow, Kubernetes

Education

University of NabiAkram

Master of Science Computer Engineering

University of Shamsipoor

Bachelor of Science Computer Engineering
GPA: 3.84

Old Dominion University

Aug 2019 - Present

Doctorate Computer Science

Relevant Coursework: Machine Learning, Data mining and big data
GPA: 3.84

Awards

Best Teaching Assistant award

May 2025

Publications

LTBoost: Boosting Recall Uniformity for Long-Tailed Image Classification via metadata set

Under Review

SAWTab: Smoothed Adaptive Weighting for Tabular Data in Semi-Supervised Learning

PAKDD2024

Progressive Feature Upgrade in Semi-supervised Learning on Tabular Domain
ICKG2022

Performance Monitoring for Exercise Movements using Mobile cameras
BodySys 2021