

Mory Gharasuie

Norfolk, VA, USA | mmohao14@odu.edu | +1 757 287 1602

<https://www.linkedin.com/in/mory-gharasui-53415258/> | <https://github.com/mortezamg63>

Technical Skills

Languages & databases: python, Java, C++, ASP Webform, C#, SQL, MySQL, HTML

Libraries: Tensorflow, Keras, PyTorch, OpenCV, Scikit-learn, NLP toolkit, HuggingFace, Pandas, Matplotlib, Seaborn, LangChain, Dask, BeautifulSoup

Development tools: Anaconda, Jupyter Notebook, Google Colab, Visual Studio, Git, Docker, AWS

Operating Systems: Windows, Linux, Mac OS X

Certifications

LanGraph: [Link](#)

LLM Engineering: [Link](#)

AWS SageMaker: [Link](#)

Awards and Honors

"Best Teaching Assistant" award, Spring 2025

Experience

Royan Communication Company | Qom, Iran

2013 - 2019

Software Developer

- Developed websites for small and medium-sized enterprises.
- Customized web-based administration interfaces for applications on Linux server machines (such as chat server, FreeRadius server, and Elastix).
- Enhanced 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.

Old Dominion University | Norfolk, USA

Aug 2019 – Present

Research Assistantship

- Developed applications for mobile and serverless domains using ML, DL, and CV.
- Doing research on improving the performance of ML and DL models on classification problems for tabular data in semi-supervised settings.
- Research on mitigating the impact of bias in imbalanced data in training ML and DL models in Image and tabular domains.

Teaching Assistantship: Programming with C/C++ and Java (CS150, CS250, CS251)

- Teaching Labs and recitations
- Assignment Development
- Grading

Medical Aid | Norfolk, USA

Summer 2024

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

Education

Old Dominion University | Norfolk, USA

Aug 2019 – present

Research Interests: Machine Learning (ML), Computer Vision (CV),

GPA: 3.84/4.0

Natural Language Processing (NLP), Semi-supervised Learning (SSL), Tabular Data Processing

University of NabiAkram | Tabriz, Iran

Master of Science in Computer Engineering

University of Shamsipoor | Tehran, Iran

Bachelor of Science in Computer Engineering

Projects

Data Science and Machine Learning Projects | *Tensorflow, PyTorch, TorchVision, OpenCV*
Scikit-learn, Seaborn, Matplotlib, Pandas, Git, BeautifulSoup

[GitHub](#)

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

- Data preprocessing and curation
- Exploring data analysis (EDA)
- Feature engineering and selection
- Machine learning development and evaluation
- Data visualization and interpretation

Pricer (Agentic LLM) | *HuggingFace, Pytorch, LangChain, Chormadb, BeautifulSoup, Scikit-learn*

[GitHub](#)

An autonomous price estimation framework using LLMs (GPT-4o, Claude, Llama 3.1-8B) and traditional ML models (Random Forest, SVM, Word2Vec). GPT-4o-mini's performance (average price difference) with RAG, improves from 80.9 to 55.57. I fine-tuned Llama3.1-8B and achieved 46.67 average error. I developed an agent that creates an ensemble model combining RAG+GPT-4o-mini, fine-tuned Llama, and Random Forest, achieving 54.62 error. I use a Gradio-based UI and integrated Pushover API for real-time deal alerts from DealNews.Com.

SAWTAB: Tabular Data and Semi-Supervised Learning (SSL) | *Pytorch, Tensorflow, Tensorboard, Scikit-learn, Matplotlib, Seaborn*

My research focuses on two key challenges in machine learning for large-scale tabular and image datasets: class imbalance learning and semi-supervised learning. I have developed domain-specific architectures for tabular learning, including deep neural networks, autoencoders (AE, VAE), GANs, and Transformer-based models tailored for supervised, self-supervised, and semi-supervised settings. Additionally, I specialize in handling class imbalance in semi-supervised learning, particularly when labeled and unlabeled data follow different distributions, aiming to mitigate bias during model training. I have also developed, fine-tuned, and pretrained models for downstream tasks in both semi-supervised and self-supervised settings, enabling robust and adaptable performance across a variety of real-world applications.

Computer Vision Projects | *Pytorch, Tensorflow, Scikit-learn, Matplotlib, Seaborn, OpenCV, Pose Estimation & Object detection frameworks*

- **Exercise Performance Monitoring:** 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:** Designed a system to recognize numbers written in mid-air using Hidden Markov Models. Implemented motion tracking with Kalman filters, trajectory segmentation, background subtraction, and action recognition techniques.
- **Video Analytics System:** Built an object detection and tracking pipeline for mobile edge cloud computing (MECC). Integrated detection and tracking into a unified framework with a graphical interface for real-time video processing. [Link](#)

Publications

CAIP2025: LTBoost: Boosting Recall Uniformity in Long-Tailed Learning | (Accepted July 2025)

PAKDD 2024: SAWTab: Smoothed Adaptive Weighting for Tabular Data in Semi-Supervised Learning | [Link](#)

ICKG 2022: Progressive Feature Upgrade in Semi-supervised Learning on Tabular Domain | [Link](#)

BodySys 2021: Performance Monitoring for Exercise Movements using Mobile cameras | [Link](#)

MVIP 2015: An efficient run-based method for connected component labeling | [Link](#)

MVIP 2013: Real-time dynamic hand gesture recognition using hidden Markov models | [Link](#)