Mohamed Fazli Imam

Research Associate at MBZUAI

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Education

Mohamed Bin Zayed University of Artificial Intelligence Aug 2022 – May 2024

Master of Science in Machine Learning (Fully funded scholarship) *CGPA 3.60/4.00*

Sri Lankan Institute of Information Technology (SLIIT) Jan 2016 – Dec 2020

Bachelor of Science (Hons) in Information Technology with specialization in Data Science *GPA 3.81/4.00*

Experience

Research Associate Jul 2024 – Present

Mohamed Bin Zayed University of Artificial Intelligence

- Led research initiatives on multimodality and visual-temporal reasoning in vision-language models.
- Developed and deployed a novel evaluation dataset to benchmark the performance of vision-language models in visual-temporal reasoning. REPO
- Collaborated with external research groups and interdisciplinary teams to advance research on vision-language models.

Data Science Intern Jun 2023 – Jul 2023

Abu Dhabi National Oil Company (ADNOC - Panorama Department)

- Led exploratory data analysis and implemented a time series forecasting model to predict dynamic flow rates for gas crackers, optimizing operational decision-making and process efficiency.
- Engineered and deployed an NLP-based Q&A system for drilling reports, leveraging LLM model APIs to extract actionable insights and deliver precise, context-driven answers to improve data accessibility and decision support. REPO

Data Science Associate Jul 2021 – Jul 2022

STAX Inc

- Conducted due diligence for private equity firms, evaluating the potential of investments through data-driven insights and market analysis to support strategic decision-making.
- Engineered data pipelines to scrape reviews and listings from major websites, providing a comprehensive analysis of the client's market, competitors, and consumer sentiment, facilitating actionable business intelligence.
- Synthesized insights from diverse data sources, including web scraping and surveys, to deliver strategic recommendations that helped clients make informed investment decisions.

Junior Data Scientist Nov 2020 – Jun 2021

National Intensive Care Surveillance Unit (NICST)

- Led exploratory data analysis and data transformation initiatives, preparing clinical trial datasets for analysis to support evidence-based decision-making in healthcare.
- Engineered automation scripts to optimize the data mapping process across various systems and formats, enhancing data integration and streamlining workflows.

Selected Projects

Label-free Adaptation of CLIP for Remote Sensing Masters Thesis

- Engineered and deployed a label-free adaptation method (ALP-RS) to enhance remote sensing scene classification, eliminating the need for labeled datasets.
- Explored the efficacy of auto-labelled prompt tuning by leveraging contextual knowledge from LLM to generate pseudo labels and adapt CLIP for remote sensing settings.

Fine-Grained Image Classification Using Counterfactual Learning Feb 2022 – May 2022

- Explored the impact of learned attentions and uncorrected (counterfactual) attentions on the final classification score in the context of fine-grained image classification.

- Conducted several experiments to analyze how counterfactual attentions, generated by perturbing the feature maps, would influence the classification score.

Domain Adaptation for RGB to Thermal Images REPO Feb 2022 – May 2022

- Investigated the effectiveness of combining feature-rich visible spectrum and thermal image modalities for urban road scenes in an unsupervised setting.
- Implemented a triple-branch weight-sharing transformer architecture for experimentation of domain adaptation.

Football Game Outcome Prediction REPO Oct 2022 – Nov 2022

- Engineered and assessed the effectiveness of a machine learning model for predicting the outcome of football matches using player statistics, team statistics, and previous match statistics.
- Scraped data related to teams participating in the FIFA 2021 World Cup and generated predictions for group stage matches to the grand finale.

Automobile Damaged Component Detection Bachelors Thesis

- Developed and explored the capabilities of computer vision algorithms to automate the process of automobile accident claim processing.
- Trained and fine-tuned state-of-the-art CNN models using a web-scraped dataset consisting of images of automobile damaged components.

Optimizing Direct Mail Fundraising Jun 2019 – Oct 2019

- Engineered a machine learning pipeline to optimize direct mail fundraising for a fictional organization.
- The machine learning pipeline included a classification model for predicting the likelihood of a person donating and a regression model for estimating the donation amount they would likely contribute.

Selected Publications

Mohamed Fazli Imam, Rufael Fedaku Marew, Jameel Hassan, Mustansar Fiaz, Alham Fikri Aji, Hisham Cholakkal, "CLIP meets DINO for Tuning Zero-Shot Classifier using Unlabeled Image Collections" in *To be submitted to* ***NeurIPS***, 2025. Available Here

Mohamed Fazli Imam, Chenyang Lyu, Alham Fikri Aji, "Can Multimodal LLMs do Visual Temporal Understanding and Reasoning? The answer is No! ", *Preprint*, 2025. Available Here

Ahmed Elshabrawy, Thanh-Nhi Nguyen, Yeeun Kang, Lihan Feng, Annant Jain, Faadil A. Shaikh, Jonibek Mansurov, **Mohamed Fazli Imam**, Jesus-German Ortiz-Barajas, Rendi Chevi, Alham Fikri Aji, "Encoder-only Models are Efficient Crosslingual Generalizers" in *Under Review in* ***ACL*** *Submission*, 2025.

David Orlando Romero Mogrovejo, Chenyang Lyu, Haryo Akbarianto Wibowo,..**Mohamed Fazli Imam**,..Thamar Solorio, Alham Fikri Aji, "CVQA: Culturally-diverse Multilingual Visual Question Answering Benchmark" in ***NeurIPS*** *Datasets and Benchmarks Track*, 2024. Available Here

Technical Skills

Development: Python, PyTorch, ML Libraries, R, SQL, RAGs, Agentic AI Libraries, Docker
Cloud: AWS, Azure
Visualization Tools: Tableau, PowerBI

Achievements

- Mentored the team that won the "Best Team Award" in the Undergraduate Research Internship Program (UGRIP) at MBZUAI.
- Awarded a Fully-funded Masters Scholarship at MBZUAI, recognizing academic excellence and research potential in the field of Artificial Intelligence.
- Consistently recognized on the SLIIT Deans' List for second, third, and final year (both Semester 1 & Semester 2).

References

- Available on request