# Mohamed Fazli Imam

Research Associate at MBZUAI Abu Dhabi, United Arab Emirates

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## **EDUCATION**

# Mohamed Bin Zayed University of Artificial Intelligence

Master of Science in Machine Learning (Fully funded scholarship)

Aug 2022 – May 2024 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

July 2024 – Present

Mohamed Bin Zayed University of Artificial Intelligence

- Conducting research on multimodality and visual-temporal reasoning in vision-language model.
- Introduced a new evaluation dataset to benchmark vision-language models' visual temporal reasoning and understanding capability. REPO

Data Science Intern

Jun 2023 – Jul 2023

Abu Dhabi National Oil Company (ADNOC - Panorama Department)

- Conducted exploratory data analysis and developed a time series model to forecast the dynamic rate of flow for a gas cracker.
- Developed a NLP-based Q&A system for drilling reports, leveraging LLM model APIs to extract valuable insights and deliver accurate contextual answers. REPO

## **Data Science Associate**

July 2021 - July 2022

STAX Inc

- Conducted due diligence for private equity firms to determine the viability of potential investments.
- Scraping reviews and listings from popular websites to comprehend the client's market, its competitors, and consumer sentiments

Junior Data Scientist

Nov 2020 – June 2021

National Intensive Care Surveillance Unit (NICST)

- Conducted exploratory data analysis and various data manipulation tasks to clean, transform, and prepare clinical trial datasets for analysis.
- Developed automation scripts to streamline the process of mapping data between different systems and formats.

## **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 *Under Review in IJCAI*, 2025. Available Here

Mohamed Fazli Imam, Chenyang Lyu, Alham Fikri Aji, "Can Multimodal LLMs do Visual Temporal Understanding and Reasoning? The answer is No!", Work in Progress. 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 NAACL 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

Mohamed Fazli Imam, Achinthya Subasinghe, Hiruni Kasthuriarachchi, Senura Fernando, Prasanna S. Haddela, Nadeesa Pemadasa, "Moderate Automobile Accident Claim Process Automation Using Machine Learning" in *International Conference on Computer Communication and Informatics (ICCCI)*, 2021. Available Here

## Projects

## Label-free Adaptation of CLIP for Remote Sensing

Masters Thesis

- Developed and implemented a label-free adaptation method for remote sensing scene classification, ALP-RS.
- Explored the efficacy of auto-labelled prompt tuning by leveraging contextual knowledge from LLM to generate pseudo labels and adapt CLIP for remote sensing setting.

# 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

- Conducted an investigation into 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

- Developed 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

June 2019 - Oct 2019

- Developed a machine learning pipeline to optimize direct mail fundraising for using 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.

## TECHNICAL SKILLS

Languages: Python, TensorFlow, Keras, PyTorch, R. SQL

Cloud: AWS, Azure ML Studio

Developer Tools: VS Code, Git, Bash scripting

Visualization Tools: Tableau, PowerBI

#### ACHIEVEMENTS

- Mentored the team that won the "Best Team Award" in the Undergraduate Research Internship Program (UGRIP) at MBZUAI
- SLIIT Deans' List Recipient for second year, third year and final year (both Semester 1 and Semester 2)

### References

• Available on request