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)

GPA 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

Machine Learning Researcher

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. CODE
- 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. CODE

Data Scientist

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.

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

• 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 CODE

- 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 CODE

- 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.

Optimizing Direct Mail Fundraising

- 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.

IoT Temperature Prediction with Dashboard

- Led the development of a Node-RED dashboard on IBM Cloud to visualize 12-month temperature forecasts.
- Designed and implemented time series models to predict temperatures in major Sri Lankan cities.

Visual Analytics with Batch and Streaming Data

- Deployed a mock hotel website with tracking codes to analyze user sessions via Google Analytics and Data Studio.
- Performed real-time streaming analytics on Uber-Lyft data using Siddhi and MySQL, enabling live SQL queries.
- Visualized insights using Tableau and Power BI.

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

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 & Frameworks, R, SQL, RAGs, Agentic AI Libraries, Docker

Cloud: Amazon Web Services (AWS), Microsofy Azure, Google Cloud Platform (GCP)

Visualization Tools: Tableau, PowerBI

ACHIEVEMENTS

- The team under my mentorship 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