

Rocktim Jyoti Das

Mohamed bin Zayed University of Artificial Intelligence,
Abu Dhabi, UAE

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EDUCATION

Indian Institute of Technology Delhi

2018 - 2022

B.Tech in Electrical Engineering with Minor in Computer Science and Engineering

CGPA: 8.541/10

PUBLICATIONS

1. **DKAF: KB Arbitration for Learning Task-Oriented Dialog Systems with Dialog-KB Inconsistencies**

Vishal Saley, **Rocktim Jyoti Das**, Dinesh Raghu, Mausam.

Accepted in ACL Findings, 2023.

2. **Exploring Distributional Shifts in Large Language Models for Code Analysis**

Shushan Arakelyan, **Rocktim Jyoti Das**, Yi Mao, Xiang Ren.

Accepted in EMNLP, 2023.

UNDER REVIEW PAPERS

1. **Beyond Size: How Gradients Shape Pruning Decisions in Large Language Models**

Rocktim Jyoti Das, Liqun Ma, Zhiqiang Shen.

under review in ICLR, 2024.

2. **Synergizing In-context and Supervised Learning for End-to-end Task-oriented Dialog Systems**

Vishal Saley, **Rocktim Jyoti Das**, Dinesh Raghu, Mausam.

under review in ACL ARR Oct Cycle, 2023.

WORK EXPERIENCE

Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi

June, 2023 - present

Research Assistant

Advisor: Prof. Preslav Nakov

Working on developing LLMs for low-resource languages, understanding the multimodal and multi-lingual reasoning capabilities of LLMs, and factuality of LLMs.

Data Analytics and Intelligence Research Group, IIT Delhi & IBM Research, India June, 2022 - June, 2023

Project Scientist

Advisor: Prof. Mausam

Worked on solving challenges related to task-oriented dialog systems and conversation-based medical diagnosis.

Intelligence and Knowledge Discovery (INK) Lab, USC

Aug, 2022 - Feb, 2023

Machine Learning Research Intern (Remote)

Advisor: Prof. Xiang Ren

Studied how the performance of LLMs with code capabilities such as Codex and ChatGPT are affected when encountering distribution shifts and how to improve it in the absence of labeled in-domain data.

OTHER RESEARCH PROJECTS

Dialog Dataset for Medical Diagnosis

Dec, 2022 - June, 2023

Advisor: Prof. Mausam

I have created a dataset by annotating transcripts of simulated doctor-patient conversations between two medical experts. The dataset is augmented with an interpretable Bayesian network, establishing the relationship between symptoms and diseases upon which the diagnosis is grounded.

Arabic Dialectal Language Model

July 2023 - Ongoing

Advisor: Prof. Preslav Nakov and Dr. Salim Roukos

I am working on developing a language model for Gulf Dialectal Arabic, as part of a collaboration between IBM and MBZUAI. My tasks include crawling and cleaning data, as well as creating robust language tools such as language identification tools specifically designed for Dialectal Arabic languages.

Multimodal and Multilingual Evaluation of Multimodal Language Models

Aug, 2023 - Ongoing

Advisor: Prof. Preslav Nakov

I am developing a new multimodal and multi-lingual QA dataset to evaluate multimodal language models on end-user tasks, where users provide snapshots to models and expect them to parse and reason relevant information for generating responses.

TEACHING & REVIEWING EXPERIENCE

- *Undergraduate Teaching Assistantship*: Electrical Engineering, IIT Delhi
 - Physical Electronics - *Prof. Debanjan Bhowmik* *Fall 2021*
 - Advanced Machine Learning - *Prof. Sandeep Kumar & Prof. Jaydeva* *Spring 2022*
 - Natural Language Processing - *Prof. Mausam* *Fall 2022*
- *Reviewing*: ACL ARR December, 2022

SKILLS

- **Programming**: C++, MATLAB, Python and L^AT_EX
- **Framework**: PyTorch, PyTorch Geometric

SELECTED COURSEWORK

Introduction to Machine Learning, Probability and Stochastic Processes, Convex Optimization, Fundamentals of Language Sciences, Natural Language Processing, Planning and Estimation for Autonomous Systems, Analysis and Design of Algorithm, Discrete Mathematics.

REFERENCES

- Dr. Mausam, Professor, Computer Science and Engineering Department, IIT, Delhi, Email: mausam@cse.iitd.ac.in.
- Dr. Preslav Nakov, Professor, NLP Department, MBZUAI, Abu Dhabi, Email: Preslav.Nakov@mbzuai.ac.ae.
- Dr. Zhiqiang Shen, Assistant Professor, ML Department, MBZUAI, Abu Dhabi, Email: Zhiqiang.Shen@mbzuai.ac.ae.