AI-ML CHALLENGE

MONSOON EDITION 2024

Mentors/Track Cores: Advait, Somsubhra, Sayan

Organizers: Shambhavi, Goutham, Rohit, Yuvalakshmi

Note: Cores are only responsible for the Problem statement/core challenge related matters (as long as the subject “ML” is concerned) in this edition.

Any doubts, please contact/tag the organizers & not the cores.

Please join https://chat.whatsapp.com/HGA056Buywy9R6QHOPGmwe for getting the updates. No mails will be sent this time. *We are NOT responsible for any issues arising from joining the group. It may not be possible to review all messages sent by users at all times.*

Rules from last edition have fully changed. Please review.

❏ **Orientation session (Sep 16th) - Watch here**

❏ **Recorded Sessions from last edition: Orientation session | Mentor Session 1 | Finale session with Mr. Piyush Wairale**

General Instructions

1. We are not hosting the challenge on external platforms like Kaggle or Codalab etc. You are **free to code in Google Colab, Jupyter notebook etc.**

2. **Registration: No separate registration is required while starting the challenge.** This will be recorded during the submission window. **Please send an email to mlchallenge@ds.study.iitm.ac.in (any one from a team) stating the track number you want to participate in. Our volunteers will send the link & you can start working on it.**

3. You are **free to form your own teams**. Each team can have at **least one (for lone-wolf) and max 4 students**. **One member can be a part of ONE team only**, else it would lead to the disqualification of all participants in such teams. Members from

different houses can form a team. Please decide a team lead (Point of Contact between organizers and the team) mutually.

4. **A team can participate in one track.**

Track SL Num	Topic	Re-run?	Who can participate?
1	**Fake news detection in Dravidian languages (Malayalam)** [multi-class classification]	**Yes** 1. Paradox in Margazhi 2024 (Dec 2023 - Jan 2024) 2. ML Challenge 1.0 (July - Aug 2024)	• New participants who haven't attempted this in any of the previous runs • Participants who have attempted this JUST ONCE in the previous 2 runs
2	**AI-Generated text detection in articles (English)** [binary classification]	**Yes** 1. Paradox 2024 (May - June 2024) 2. ML Challenge 1.0 (July - Aug 2024)	• New participants who haven't attempted this in any of the previous runs • Participants who have attempted this JUST ONCE in the previous 2 runs
	Analyzing 2010 data on traffic stops across the United States from Stanford open policing project [clustering task]	**Yes** 1. Paradox in Margazhi 2024 (Dec 2023 - Jan 2024)	DISCONTINUED No further participation allowed
3	**Answer Generation based on Numerical reasoning (English)**		Open to All

None of the datasets are created by us. Source credits are provided in track specific QPs.

Re-run Topics:

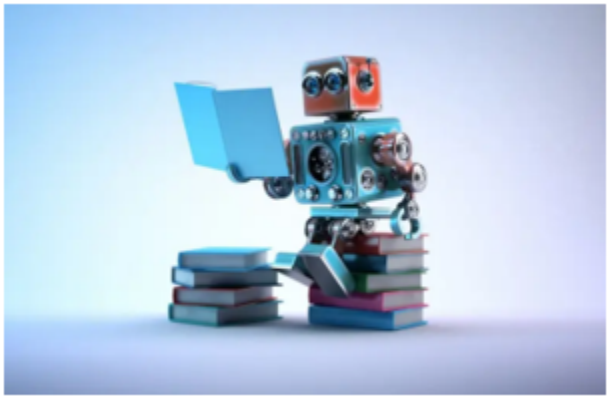
Track1: Fake News Detection in Dravidian Languages

Motivation: In an age of information overload, accurately categorizing fake news is crucial for fostering reliable communication. The task underscores the need to explore the effectiveness of NLP in understanding Dravidian languages, which are less widely spoken.

Track2: AI-Generated Text Detection in Articles

Motivation With the rapid advancement of AI, distinguishing between human-written and AI-generated content is increasingly challenging. The task aims to accurately identify the origin of textual content, contributing to the development of robust techniques for detecting AI-generated text.

New Topics:



Track3: Answer Generation based on Numerical reasoning

Motivation: Understanding numerical values is crucial for accurate text comprehension and logical reasoning. Despite their success in handling a range of linguistic tasks, pre-trained language models often struggle with numerical reasoning and logical inference, leading to errors in reading comprehension and miscalculation of numerical values. Numbers are essential for a nuanced understanding of texts and for drawing logical conclusions. Many natural language processing systems still treat numerical words superficially, without fully grasping their significance or the logical implications they carry. Addressing this gap is vital for enhancing the reliability and effectiveness of models in domains where numerical precision and logical reasoning are critical.

Some Resources

- Understanding basics of Classification
- Understanding Binary classification (DeepLearningAI)
- Simple ML model to predict new category for multi-class classification
- Top ML algorithms for classification
- Building first ML model in Python
- Best Binary classification models in ML
- Tutorial on Logistic regression (binary classification)

Python prerequisites

Timeline

Release of train & un-labelled test data: 16th September 2024

Training & validation phase starts (teams can train, optimize their models): 16th September 2024

Testing Phase starts: 18th September 2024

Deadline to submit final runs: 19th September 2024

General Rules for receiving the Participation certificate from Wayanad House:

- **Submission must be done within the due time & following all track specific guidelines.**

Rules for receiving the Appreciation certificate from Wayanad House:

- **Submission must be done within the due time.**

- **macF1 score >=0.35 (in track 1)**

- **macF1 score >=0.75 (in track 2)**

- **score >=0.60 (in track 3)**

Rules for receiving the 'Excellence' certificate from Wayanad House:

- **macF1 score >=0.43 (in track 1)**

- **macF1 score >=0.97 (in track 2)**

- **score >=0.80 (in track 3)**

Note: No certificates (participation/appreciation/excellence) for students who have submitted the solution in the last edition of the challenge, if they are participating in the same track.

SUBMISSION GUIDELINES WILL BE PROVIDED EXPLICITLY IN THE TRACK SPECIFIC PROBLEM STATEMENT DOCUMENT.

We will provide an interface to test-run your model performance on the main test dataset an unlimited number of times before you submit your final prediction file. This will help you optimize your model performance & submit the best run. LINK:

https://wayanadonline.unaux.com/mlc.php

**No presentation/finale/app deployment rounds this time. We are seeing if we can host a discussion session at the end of the challenge.

Incase of any issues, tag our volunteers **in the discussion group.**

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Maintained inside Wayanad House

Last Updated: 17th September 2024 12.15 IST