IRE Major Project

Scope Document

GROUP NO. 12

Introduction:

Online sexism has become prevalent in the age of internet. Most of the comments and posts associated with it have strong prejudice over certain groups. Our task is to collect relevant data and to see pattern and analyze data for classification into different sexists stereotypes.

Problem Statement:

Detecting and analyzing sexist stereotyping on Instagram or any other social media platform: Involves the identification and expansion of hash tags/keywords to collect relevant data, exploring various approaches for classifying/detecting sexist stereotyping, analyzing the results, etc.

Implementation Plan:

1. **Creation of relevant data**: The identification and expansion of hash tags/keywords to collect relevant data. Includes data collection, preprocessing etc.
2. **Detection of sexist stereotyping:** Binary classification of post (textual part) into 'present' (indicating that the post exhibits or gives an account of sexist stereotyping) and 'absent' classes.
3. **Classifying sexist stereotyping:** Binary classification of a post already identified as involving sexist stereotyping into 'role stereotyping' and 'attribute stereotyping' described below
    1. Combine this with point 2 and perform a single-shot 3-class classification.
    2. Multi-label or single-label classification.

    Role Stereotyping:
    1. Generalized false notions w.r.t. roles, suggesting that certain roles are more suited to or meant for women (and others for men).
    2. The list of roles: all professions (involving some income), parenting, household chores (e.g., doing dishes/laundry, cooking), being a wife/husband, etc.
    3. For other stereotypes with some connection to roles/attributes, mark this alone if you are absolutely sure of the activity mentioned being a role. Otherwise, mark both role and attribute stereotyping.

    Attribute Stereotyping:
    1. Mistaken notions linking women (or men) with physical/psychological/ behavioral qualities or likes/dislikes. All sexist stereotypes that do not fall under role stereotyping are marked with this.
    2. If something generic cuts across all roles, it's attribute stereotyping.

4. **Unsupervised analysis/inference:** If labeled data set is not available for 2 or 3, we will perform unsupervised analysis on unlabeled posts.

Dataset:

If Labeled dataset is readily available which will suffice our data needs, we will model our implementation on that dataset. If the dataset is not available, Instagram has API available for data scraping with its limitations.

APIs available for Instagram data scrapping:

I**nstagram Graph API:** *https://developers.facebook.com/docs/instagram-api*

The Instagram Graph API allows apps to access data in Instagram Business Accounts and Instagram Creator Accounts.

Limitations :

- ordering results is not supported.
- all endpoints support cursor-based pagination, but the /{user-id}/insights edge the only endpoint that supports time-based pagination.

Milestones:

- Phase 1: (30 September – 6 October)
  - Collect/ aquire relevant data from Instagram or other social media platform.
- Phase 2: (7 October – 13 October)
  - Come up with different implementation techniques for classification and unsupervised learning.
  - Decide on best possible solution.
- Phase 3: (14 October – 21 October)
  - Implement code and analysis of results.

Relevant Readings:

1. https://arxiv.org/pdf/1902.03089.pdf
2. https://www.aclweb.org/anthology/P19-1167
3. https://www.aclweb.org/anthology/W17-2902