Overview of The Shared Task on Homophobia and Transphobia Detection in Social Media Comments

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Abstract

Homophobia and Transphobia Detection is the task of identifying homophobia, transphobia, and non-anti-LGBT+ content from the given corpus. Homophobia and transphobia are both toxic languages directed at LGBTQ+ individuals that are described as hate speech. This paper summarizes our findings on the "Homophobia and Transphobia Detection in social media comments" shared task held at LT-EDI 2022 - ACL 2022 [1]. This shared task focused on three sub-tasks for Tamil, English, and Tamil-English (code-mixed) languages. It received 10 systems for Tamil, 13 systems for English, and 11 systems for Tamil-English. The best systems for Tamil, English, and Tamil-English scored 0.570, 0.870, and 0.610, respectively, on average macro F1-score.

1 Introduction

Violence is becoming more common on social media platforms, negatively influencing internet users. Social media plays an essential role in online communication in the digital era, allowing users to freely upload and share content and express their opinions and thoughts. The use of social media platforms for online communication has grown across all languages worldwide. These platforms allow users to post and exchange content and express their opinions on any topic at any moment (Al-Hassan and Al-Dossari, 2021; Chakravarthi et al., 2021b). It has become a big concern for online communities due to the proliferation of online material (Kumar et al., 2018). It's considerably worse for lesbians, gays, bisexuals, transgender people, and other (LGBTQ+) vulnerable people (Díaz-Torres et al., 2020). LGBTQ+ individuals are subjected to abuse, inequality, torture, and even execution worldwide because of how they look, whom they love, or who they are (Barrientos et al., 2010; Schneider and Dimito, 2010). Sexual orientation and gender identity are crucial elements of our identities that should never be misused or discriminated against (Thurlow, 2001). In many countries, however, being LGBTQ+ can lead to death; therefore, a vulnerable person may turn to social media for assistance or share their tales in the hopes of meeting others who share their experiences (Adkins et al., 2018; Han et al., 2019).

This shared task uses a new gold standard dataset for Homophobia and Transphobia Identification in Dravidian Tamil, English, and Tamil-English (code-mixed) languages. Tamil (ISO 639-3: tam) is one of the Dravidian languages and a primary language of Tamil Nadu, Pondicherry, Sri Lanka, and Singapore, as well as a recognized minority language in Malaysia and South Africa with 75 million speakers (Thavareesan and Mahesan, 2019a, 2020a). Tamil is one of the world's longest-surviving classical languages. The earliest Old Tamil documents are small inscriptions in Adichanallur dating from 905 BC to 696 BC. Tamil uses agglutinative grammar, which uses suffixes to indicate noun class, number, case, verb tense, and other grammatical categories. Tamil is the standard metalinguistic terminology and scholarly vocabulary, as opposed to Sanskrit, which is the norm for most Aryan languages (Anita and Subalalitha, 2019b,a; Subalalitha and Poovammal, 2018). Tamil words are made up of a lexical root and one or more affixes. The majority of Tamil affixes are suffixes. Tamil suffixes are either derivational suffixes, which modify the part of speech or meaning of the word, or inflectional suffixes, which designate categories like as person, number, mood, tense, and so on. There is no ultimate limit to the length and scope of agglutination, which might result in large words with several suffixes, requiring many words or a sentence in English (Subalalitha, 2019; Srinivasan and Subalalitha, 2019; Narasimhan et al., 2018). There are 12 vowels, 18 consonants, and one unique

[1]https://sites.google.com/view/lt-edi-2022/home

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character called the aytam in the current Tamil script. The vowels and consonants combine to make 216 compound characters, bringing the total number of characters to 247 (Sakuntharaj and Mahesan, 2021, 2017, 2016; Thavareesan and Mahesan, 2019b, 2020b,c, 2021). However, social media users frequently utilize it because it is easier to type other languages has the roman script. As a result, the maximum of the information for these under-resourced languages available on social media is code-mixed.

This shared task aims to aid research on detecting Homophobic and Transphobic content in Tamil, English, and Tamil-English (code-mixed) languages from social media. Participants were provided with the training, development, and test set for this task. The task description, data description, task and evaluation settings, participant's methodology, results and discussion, and conclusion are all summarized in the upcoming section.

2 Related work

As social media applications are used worldwide, information and communication technology, mainly social media, has changed the way individuals communicate and develop connections. For instance, YouTube is a popular social networking site where users can create their profiles, submit videos, and make comments. Thanks to " liking " and " sharing " methods, it has a broad audience as thousands of people may watch each video or comment, thanks to "liking" and "sharing" methods (Sampath et al., 2022; Ravikiran et al., 2022; Bharathi et al., 2022; Priyadharshini et al., 2022; Chakravarthi et al., 2022a). These comments permit cyberbullies to share unflattering or undesirable information about their victims easily. Unfortunately, this opens the door for antisocial behaviors such as misogyny (Mulki and Ghanem, 2021), sexism, homophobia (Diefendorf and Bridges, 2020), transphobia (Giametta and Havkin, 2021), and racism (Larimore et al., 2021) to flourish. When it involves crawling social media data, there are several efforts on YouTube mining, largely focusing on exploiting user comments. Computer scientists began to research text-based algorithms for spotting abusive languages and hate speech by mining social media data. The use of social media has proliferated. A previous study on Homophobia and Transphobia identification was conducted in 2021 on the dataset paper (Chakravarthi et al., 2021b) in which Tamil, English, and Tamil-English code-mixed datasets were built. The dataset comprises 15,141 comments: Tamil – 4946, English – 4161, Tamil-English – 6034, collected from YouTube. The dataset was classified at various levels of offensiveness, namely," Homophobic," " Transphobic," "counter speech," "hope speech," and " Non-anti-LGBT+ content," by many annotators, trained volunteers from the LGBTQ+ community who identify as LGBTQ+ or LGBTQ+ allies.

3 Task Description

The primary goal of this venture is to detect homophobic and transphobic statements in a dataset collected from social media in Tamil, English, and Tamil-English. This task is a comment/post-level classification task. Systems must classify a comment as homophobia or transphobia or non-anti-LGBTQ+ content. Although a comment/post in the dataset may contain more than one sentences, the corpus' average sentence length is one. The corpus includes annotations at the comment/post level. The Participants were given development, training, and test datasets in Tamil, English, and Tamil-English.

4 Data Description

Twitter, Facebook, and YouTube are social media sites that include unintentionally converting information provided by millions of consumers, which may impact a person's or company's reputation. There is a growth in call for the importance of emotion extraction software systems and identifying irrelevant words in online social media.

The datasets are based on users' comments on popular videos, review products, etc., increasing on youtube nowadays. Thus, it allows extra user-generated content material in languages with constrained resources. Likewise, it is equal for vulnerable LGBTQ+ people who watch similar motion pictures and remark approximately the video they join. We chose to acquire statistics from social media feedback on YouTube since it is the most substantially used medium with-inside the world for expressing an opinion approximately a specific video. Homophobia and transphobia are not given much attention. Recently (Guest et al., 2021) created an expert annotated dataset for detecting online misogyny. We collected our dataset inspired by their work.

We collected comments from the YouTube

Table 1: Class-wise distribution of the dataset

Labels	English	Tamil	Tamil-English
Homophobic	276	723	465
Transphobic	13	233	184
Non-anti-LGBTQ+ content	4,657	3,205	5,385
Total	4,946	4,161	6,034

videos that explain LGBTQ+ instead of collecting statements from LGBTQ+ people's personal coming out stories because they contained confidential information. These comments were collected with the help of the YouTube Comment Scraper tool[2] and were manually annotated with three labels, namely 'Homophobic,' 'Transphobic' and 'Non-anti-LGBT+ content.' We collected the dataset in 3 language settings: Tamil, English, and Tamil-English. The complete details about the dataset can be gathered from (Chakravarthi et al., 2021b)

5 Task Setting and Evaluation setting

All of the datasets have an unbalanced distribution of homophobia and transphobia classes. The majority of comments in the Tamil-English code-mixed dataset belong to the Non-anti-LGBTQ+ content (5,385) class, indicating a class imbalance seen in the table. In the Tamil and English dataset, the majority class is Non-anti-LGBTQ+ content (3,205 and 4,657) compared to the other two categories. This disparity was rectified by selecting the macro-averaged F1-score (F) official evaluation metric task significant variance number of instances in different classes. Macro-averaging gives the same weight to all classes, irrespective of their size. We utilized a Scikit learn classification report tool[3]. Participants were able to submit up to five test runs, with one of them serving as official runs that would be scored and shown on the leader board. If no official runs were specified, the most recent contributions from each team were assumed to be official. In their papers, we allowed groups to explore the distinctions between their systems. The goal is for teams to compare the effectiveness of various setups on the test set.

[2] https://github.com/philbot9/youtube-remarkscraper

[3] https://scikit-learn.org/stable/modules/generated/sklearn.metrics.classification_report.html

6 Participants methodology

In this competition, a total of 98 participants registered. From this, we received a total of 10, 13, and 11 submissions for Tamil, English, and Tamil-English languages, respectively. The techniques and outcomes of these tasks have been described. For more critical information, refers to their papers, which are stated below:

ABLIMET (Maimaitituoheti and Abulimiti, 2022) has used a fine-tuning approach to the pre-trained language model. This model processes the target data and normalizes its output by a layer normalization module, followed by two fully connected layers. The pre-trained language model they used is the Roberta-base model for the English subtask, Tamil-Roberta for Tamil, and Tamil-English subtasks.

bitsa_nlp (Bhandari and Goyal, 2022) has used famous distinctive models primarily based totally on the transformer architecture and a data augmentation approach for oversampling the English, Tamil, and Tamil-English datasets. They implemented various pre-trained language models based on the Transformer architectures, namely BERT, mBERT / multilingual BERT, XLM-RoBERTa, IndicBERT, and HateBERT, to classify detecting homophobic and transphobic contents.

SSNCSE_NLP (Swaminathan et al., 2022) has used a combination of word embeddings and classifiers, as well as some transformers for experiments with the code mixed datasets. They executed the feature extractions using TF-IDF and count vectorizer with some models, namely SVM, MLP, random forest, K-nearest neighbors, and simple transformers like LaBSE, tamillion, and IndicBERT.

NAYEL (Ashraf et al., 2022) has experimented with TF-IDF with bigram models to vectorize comments. Then they implemented a set of classification algorithms like Support Vector Machine, Random Forest, Passive Aggressive Classifier, Gaussian Naïve Bayes, and Multi-Layer Perceptron. From these models, they submitted a support vector machine as the best model because it gave high

Table 2: Rank list for Tamil language

Teams	Acc	mac_Pre	mac_re	mac_f1	W_Pre	W_re	W_f1	Rank
ARGUABLY	0.940	0.880	0.850	0.870	0.940	0.940	0.940	1
NAYEL (Ashraf et al., 2022)	0.920	0.860	0.810	0.840	0.920	0.920	0.920	2
UMUTeam (García-Díaz et al., 2022)	0.920	0.850	0.800	0.820	0.920	0.920	0.920	3
hate-alert	0.900	0.830	0.750	0.780	0.900	0.900	0.900	4
Ablimet (Maimaitituoheti and Abulimiti, 2022)	0.890	0.810	0.710	0.750	0.880	0.890	0.880	5
bitsa_nlp (Bhandari and Goyal, 2022)	0.850	0.690	0.610	0.640	0.840	0.850	0.840	6
niksss	0.810	0.720	0.590	0.620	0.820	0.810	0.810	7
Sammaan (Upadhyay et al., 2022)	0.880	0.520	0.580	0.550	0.850	0.880	0.860	8
SSNCSE_NLP (Swaminathan et al., 2022)	0.770	0.550	0.470	0.500	0.740	0.770	0.750	9
SOA_NLP	0.690	0.360	0.360	0.360	0.670	0.690	0.680	10

Table 3: Rank list for English language

Teams	Acc	mac_Pre	mac_re	mac_f1	W_Pre	W_re	W_f1	Rank
Ablimet (Maimaitituoheti and Abulimiti, 2022)	0.910	0.570	0.610	0.570	0.940	0.910	0.920	1
Sammaan (Upadhyay et al., 2022)	0.940	0.520	0.470	0.490	0.930	0.940	0.940	2
Nozza (Debora and Nozza, 2022)	0.950	0.580	0.450	0.480	0.940	0.950	0.940	3
hate-alert	0.940	0.510	0.450	0.470	0.920	0.940	0.930	4
LeaningTower	0.940	0.530	0.430	0.460	0.930	0.940	0.930	4
leaningtower	0.940	0.530	0.430	0.460	0.930	0.940	0.930	5
niksss	0.930	0.460	0.440	0.450	0.920	0.930	0.920	6
UMUTeam (García-Díaz et al., 2022)	0.930	0.480	0.430	0.450	0.920	0.930	0.920	7
ARGUABLY	0.940	0.540	0.400	0.430	0.920	0.940	0.920	8
SOA_NLP	0.940	0.500	0.400	0.430	0.920	0.940	0.920	9
bitsa_nlp (Bhandari and Goyal, 2022)	0.920	0.430	0.420	0.420	0.910	0.920	0.910	10
NAYEL (Ashraf et al., 2022)	0.940	0.510	0.370	0.390	0.910	0.940	0.910	11
SSNCSE_NLP (Swaminathan et al., 2022)	0.930	0.480	0.370	0.390	0.910	0.930	0.910	12

Table 4: Rank list for Tamil-English dataset

Teams	Acc	mac_Pre	mac_re	mac_f1	W_Pre	W_re	W_f1	Rank
ARGUABLY	0.890	0.630	0.600	0.610	0.890	0.890	0.890	1
UMUTeam (García-Díaz et al., 2022)	0.850	0.540	0.670	0.580	0.900	0.850	0.870	2
bitsa_nlp (Bhandari and Goyal, 2022)	0.880	0.610	0.560	0.580	0.890	0.880	0.880	3
hate-alert	0.830	0.540	0.630	0.560	0.890	0.830	0.850	4
SOA_NLP	0.900	0.650	0.500	0.540	0.890	0.900	0.890	5
Ablimet (Maimaitituoheti and Abulimiti, 2022)	0.800	0.490	0.640	0.530	0.880	0.800	0.830	6
niksss	0.880	0.560	0.500	0.520	0.870	0.880	0.880	7
NAYEL (Ashraf et al., 2022)	0.900	0.620	0.470	0.510	0.870	0.900	0.880	8
SSNCSE_NLP (Swaminathan et al., 2022)	0.890	0.660	0.430	0.470	0.870	0.890	0.870	9
Sammaan (Upadhyay et al., 2022)	0.830	0.340	0.350	0.350	0.820	0.830	0.830	10
Ajetavya_Tamil-English	0.870	0.340	0.340	0.340	0.820	0.870	0.840	11

accuracy compared to other models.

Nozza (Debora and Nozza, 2022) team used fine-tuned models, and they selected two large language models, BERT and RoBERTa, to classify the task and gave the result which is shown above. Also, they chose HateBERT to provide more accuracy than other models, while this better results than the BERT model. They experimented with the ensemble modeling created with a meta-classifier that treats the predicted label of distinct machine learning classifiers as a vote towards the final label they give as a prediction. Also, they gave two frameworks for ensemble: majority voting and weighted voting.

Sammaan (Upadhyay et al., 2022): This team used an ensemble of transformer-based models to build the classifier. They got 2nd rank for English, 8th rank for Tamil, and 10th rank for Tamil-English. They experimented with models BERT, RoBERTa, HateBERT, IndicBERT, XGBoost, Random Forest classifier, and Bayesian Optimization.

UMUTeam (García-Díaz et al., 2022): This team used neural networks that combine several features sets, including linguistic components extracted from a self-developed tool and contextual and non-contextual sentence embeddings. This team got 7th, 3rd, and 2nd ranks in English, Tamil, and Tamil-English.

7 Results and Discussion

There was a total of 98 people who registered for this shared task. For the Tamil, English, and Tamil-English datasets, 14 teams submitted final findings. In the Table 2, 3 and Table 4 shows the rank list for Tamil, English and Tamil-English. We used the average macro F1 score to rank the teams as it identifies the F1 score in each label and calculates their unweighted average. Macro F1 scores arrange the runs in descending order. The Ablimet team gave the best performance only in the English dataset using a fine-tuning approach to the pre-trained language model. The pre-trained language model used the Roberta-base model for this English sub-task. From these models, they submit RoBERTa based as the best model for this English dataset. This transformer model achieved well compared to other models, and this calculation is made with the help of the Macro F1 score. However, these models performed very low in the Tamil and Tamil-English subtasks. They got 5th rank in Tamil and 6th rank Tamil-English because those models gave less accuracy. Because they did data balancing in these tasks for balancing the data to perform the model, this gave better results, but compared to other teams performed well and gave better output. ARGUABLY team performed well in Tamil and Tamil-English tasks using Machine learning and deep learning architectures to classify homophobia and transphobia. Other groups also performed better in this task, primarily those teams organized with fine-tuning approach, pre-trained models, and transformer models such as BERT(Devlin et al., 2018), mBERT / multilingual. BERT, XLM-RoBERTa(Conneau et al., 2019), IndicBERT(Kakwani et al., 2020), HateBERT(Caselli et al., 2020), etc. They include TF-IDF, count vectorizer, etc., for extracting the feature from the datasets. We gave the overall descriptions of those teams in the participant's methodology.

8 Conclusion

This paper describes the first collaborative effort for detecting homophobia and transphobia in social media on the Tamil, English, and Tamil-English (code-mixed) dataset to classify YouTube comments. The most successful system used XLM RoBERTa pre-trained language models for zero-shot learning to deal with data imbalance and multilingualism. For Tamil, English, and Tamil-English datasets, their method received macro F1 scores of 0.87, 0.43, and 0.61. The findings show that all three languages, Tamil, English, and Tamil-English, have the opportunity for improvement. The increased number of participants and improved system performance indicates a growing interest in Dravidian NLP. We intend to expand the effort in the future to include more Dravidian languages such as Malayalam, Kannada, and Telugu. To make the system more real-time, we also planned to add mixed script data.

References

Victoria Adkins, Ellie Masters, Daniel Shumer, and Ellen Selkie. 2018. Exploring transgender adolescents' use of social media for support and health information seeking. *Journal of Adolescent Health*, 62(2):S44.

Areej Al-Hassan and Hmood Al-Dossari. 2021. Detection of hate speech in arabic tweets using deep learning. *Multimedia Systems*, pages 1–12.

R Anita and CN Subalalitha. 2019a. An approach to cluster Tamil literatures using discourse connectives.

In *2019 IEEE 1st International Conference on Energy, Systems and Information Processing (ICESIP)*, pages 1–4. IEEE.

R Anita and CN Subalalitha. 2019b. Building discourse parser for Thirukkural. In *Proceedings of the 16th International Conference on Natural Language Processing*, pages 18–25.

Nsrin Ashraf, Mohammed Taha, Ahmed Taha, and Hamada Nayel. 2022. Nayel @lt-edi-acl2022: Homophobia/transphobia detection for Equality, Diversity, and Inclusion using Svm. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Bharathi B and Agnusimmaculate Silvia A. 2021a. SSNCSE_NLP@DravidianLangTech-EACL2021: Meme classification for Tamil using machine learning approach. In *Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages*, pages 336–339, Kyiv. Association for Computational Linguistics.

Bharathi B and Agnusimmaculate Silvia A. 2021b. SSNCSE_NLP@DravidianLangTech-EACL2021: Offensive language identification on multilingual code mixing text. In *Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages*, pages 313–318, Kyiv. Association for Computational Linguistics.

Jaime Barrientos, Jimena Silva, Susan Catalán, Fabiola Gómez, and Jimena Longueira. 2010. Discrimination and victimization: parade for lesbian, gay, bisexual, and transgender (lgbt) pride, in chile. *Journal of homosexuality*, 57(6):760–775.

Vitthal Bhandari and Poonam Goyal. 2022. bitsa_nlp@lt-edi-acl2022: Leveraging pretrained language models for detecting homophobia and transphobia in Social Media Comments. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

B Bharathi, Bharathi Raja Chakravarthi, Subalalitha Chinnaudayar Navaneethakrishnan, N Sripriya, Arunaggiri Pandian, and Swetha Valli. 2022. Findings of the shared task on Speech Recognition for Vulnerable Individuals in Tamil. In *Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion*. Association for Computational Linguistics.

Tommaso Caselli, Valerio Basile, Jelena Mitrović, and Michael Granitzer. 2020. Hatebert: Retraining bert for abusive language detection in english. *arXiv preprint arXiv:2010.12472*.

Bharathi Raja Chakravarthi. 2020a. HopeEDI: A multilingual hope speech detection dataset for equality, diversity, and inclusion. In *Proceedings of the Third Workshop on Computational Modeling of People's Opinions, Personality, and Emotion's in Social Media*, pages 41–53, Barcelona, Spain (Online). Association for Computational Linguistics.

Bharathi Raja Chakravarthi. 2020b. *Leveraging orthographic information to improve machine translation of under-resourced languages*. Ph.D. thesis, NUI Galway.

Bharathi Raja Chakravarthi, Mihael Arcan, and John P. McCrae. 2018. Improving wordnets for under-resourced languages using machine translation. In *Proceedings of the 9th Global Wordnet Conference*, pages 77–86, Nanyang Technological University (NTU), Singapore. Global Wordnet Association.

Bharathi Raja Chakravarthi, Mihael Arcan, and John P McCrae. 2019a. Comparison of different orthographies for machine translation of under-resourced Dravidian languages. In *2nd Conference on Language, Data and Knowledge (LDK 2019)*. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

Bharathi Raja Chakravarthi, Mihael Arcan, and John P. McCrae. 2019b. WordNet gloss translation for under-resourced languages using multilingual neural machine translation. In *Proceedings of the Second Workshop on Multilingualism at the Intersection of Knowledge Bases and Machine Translation*, pages 1–7, Dublin, Ireland. European Association for Machine Translation.

Bharathi Raja Chakravarthi, Dhivya Chinnappa, Ruba Priyadharshini, Anand Kumar Madasamy, Sangeetha Sivanesan, Subalalitha Chinnaudayar Navaneethakrishnan, Sajeetha Thavareesan, Dhanalakshmi Vadivel, Rahul Ponnusamy, and Prasanna Kumar Kumaresan. 2021a. Developing successful shared tasks on offensive language identification for dravidian languages. *arXiv preprint arXiv:2111.03375*.

Bharathi Raja Chakravarthi and Vigneshwaran Muralidaran. 2021. Findings of the shared task on hope speech detection for equality, diversity, and inclusion. In *Proceedings of the First Workshop on Language Technology for Equality, Diversity and Inclusion*, pages 61–72, Kyiv. Association for Computational Linguistics.

Bharathi Raja Chakravarthi, Vigneshwaran Muralidaran, Ruba Priyadharshini, Subalalitha Chinnaudayar Navaneethakrishnan, John Phillip McCrae, Miguel Ángel García-Cumbreras, Salud María Jiménez-Zafra, Rafael Valencia-García, Prasanna Kumar Kumaresan, Rahul Ponnusamy, Daniel García-Baena, and José Antonio García-Díaz. 2022a. Findings of the shared task on Hope Speech Detection for Equality, Diversity, and Inclusion. In *Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion*. Association for Computational Linguistics.

Bharathi Raja Chakravarthi, Vigneshwaran Muralidaran, Ruba Priyadharshini, and John Philip Mc-

Crae. 2020a. Corpus creation for sentiment analysis in code-mixed Tamil-English text. In *Proceedings of the 1st Joint Workshop on Spoken Language Technologies for Under-resourced languages (SLTU) and Collaboration and Computing for Under-Resourced Languages (CCURL)*, pages 202–210, Marseille, France. European Language Resources association.

Bharathi Raja Chakravarthi, Ruba Priyadharshini, Thenmozhi Durairaj, John Phillip McCrae, Paul Buitaleer, Prasanna Kumar Kumaresan, and Rahul Ponnusamy. 2022b. Findings of the shared task on Homophobia Transphobia Detection in Social Media Comments. In *Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion*. Association for Computational Linguistics.

Bharathi Raja Chakravarthi, Ruba Priyadharshini, Vigneshwaran Muralidaran, Navya Jose, Shardul Suryawanshi, Elizabeth Sherly, and John P. McCrae. 2022c. DravidianCodeMix: sentiment analysis and offensive language identification dataset for Dravidian languages in code-mixed text. *Language Resources and Evaluation*.

Bharathi Raja Chakravarthi, Ruba Priyadharshini, Vigneshwaran Muralidaran, Shardul Suryawanshi, Navya Jose, Elizabeth Sherly, and John P McCrae. 2020b. Overview of the track on sentiment analysis for Dravidian languages in code-mixed text. In *Forum for Information Retrieval Evaluation*, pages 21–24.

Bharathi Raja Chakravarthi, Ruba Priyadharshini, Rahul Ponnusamy, Prasanna Kumar Kumaresan, Kayalvizhi Sampath, Durairaj Thenmozhi, Sathiyaraj Thangasamy, Rajendran Nallathambi, and John Phillip McCrae. 2021b. Dataset for identification of homophobia and transophobia in multilingual youtube comments. *arXiv preprint arXiv:2109.00227*.

Bharathi Raja Chakravarthi, Ruba Priyadharshini, Bernardo Stearns, Arun Jayapal, Sridevy S, Mihael Arcan, Manel Zarrouk, and John P McCrae. 2019c. Multilingual multimodal machine translation for Dravidian languages utilizing phonetic transcription. In *Proceedings of the 2nd Workshop on Technologies for MT of Low Resource Languages*, pages 56–63, Dublin, Ireland. European Association for Machine Translation.

Bharathi Raja Chakravarthi, Priya Rani, Mihael Arcan, and John P McCrae. 2021c. A survey of orthographic information in machine translation. *SN Computer Science*, 2(4):1–19.

Bharathi Raja Chakravarthi, KP Soman, Rahul Ponnusamy, Prasanna Kumar Kumaresan, Kingston Pal Thamburaj, John P McCrae, et al. 2021d. Dravidianmultimodality: A dataset for multi-modal sentiment analysis in tamil and malayalam. *arXiv preprint arXiv:2106.04853*.

Alexis Conneau, Kartikay Khandelwal, Naman Goyal, Vishrav Chaudhary, Guillaume Wenzek, Francisco Guzmán, Edouard Grave, Myle Ott, Luke Zettlemoyer, and Veselin Stoyanov. 2019. Unsupervised cross-lingual representation learning at scale. *arXiv preprint arXiv:1911.02116*.

Debora and Nozza. 2022. Nozza@lt-edi-acl2022: Ensemble modeling for homophobia and Transphobia Detection. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Jacob Devlin, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova. 2018. Bert: Pre-training of deep bidirectional transformers for language understanding. *arXiv preprint arXiv:1810.04805*.

María José Díaz-Torres, Paulina Alejandra Morán-Méndez, Luis Villasenor-Pineda, Manuel Montes, Juan Aguilera, and Luis Meneses-Lerín. 2020. Automatic detection of offensive language in social media: Defining linguistic criteria to build a mexican spanish dataset. In *Proceedings of the Second Workshop on Trolling, Aggression and Cyberbullying*, pages 132–136.

Sarah Diefendorf and Tristan Bridges. 2020. On the enduring relationship between masculinity and homophobia. *Sexualities*, 23(7):1264–1284.

García-Díaz, Camilo José Antonio, Caparrós-Laiz, and Rafael Valencia-García. 2022. Umuteam@lt-edi-acl2022: Detecting homophobic and transphobic comments in Tamil. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Nikhil Ghanghor, Parameswari Krishnamurthy, Sajeetha Thavareesan, Ruba Priyadharshini, and Bharathi Raja Chakravarthi. 2021a. IIITK@DravidianLangTech-EACL2021: Offensive language identification and meme classification in Tamil, Malayalam and Kannada. In *Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages*, pages 222–229, Kyiv. Association for Computational Linguistics.

Nikhil Ghanghor, Rahul Ponnusamy, Prasanna Kumar Kumaresan, Ruba Priyadharshini, Sajeetha Thavareesan, and Bharathi Raja Chakravarthi. 2021b. IIITK@LT-EDI-EACL2021: Hope speech detection for equality, diversity, and inclusion in Tamil , Malayalam and English. In *Proceedings of the First Workshop on Language Technology for Equality, Diversity and Inclusion*, pages 197–203, Kyiv. Association for Computational Linguistics.

Calogero Giametta and Shira Havkin. 2021. Mapping homo/transphobia. *ACME: An International Journal for Critical Geographies*, 20(1):99–119.

Ella Guest, Bertie Vidgen, Alexandros Mittos, Nishanth Sastry, Gareth Tyson, and Helen Margetts. 2021. An expert annotated dataset for the detection of online misogyny. In *Proceedings of the 16th Conference of the European Chapter of the Association for Computational Linguistics: Main Volume*, pages 1336–1350, Online. Association for Computational Linguistics.

Priyanka Gupta, Shriya Gandhi, and Bharathi Raja Chakravarthi. 2021. Leveraging transfer learning techniques-BERT, RoBERTa, ALBERT and DistilBERT for fake review detection. In *Forum for Information Retrieval Evaluation*, pages 75–82.

Xi Han, Wenting Han, Jiabin Qu, Bei Li, and Qinghua Zhu. 2019. What happens online stays online?——social media dependency, online support behavior and offline effects for lgbt. *Computers in Human Behavior*, 93:91–98.

Adeep Hande, Siddhanth U Hegde, Ruba Priyadharshini, Rahul Ponnusamy, Prasanna Kumar Kumaresan, Sajeetha Thavareesan, and Bharathi Raja Chakravarthi. 2021. Benchmarking multi-task learning for sentiment analysis and offensive language identification in under-resourced dravidian languages. *arXiv preprint arXiv:2108.03867*.

Divyanshu Kakwani, Anoop Kunchukuttan, Satish Golla, NC Gokul, Avik Bhattacharyya, Mitesh M Khapra, and Pratyush Kumar. 2020. Indicnlpsuite: Monolingual corpora, evaluation benchmarks and pre-trained multilingual language models for indian languages. In *Findings of the Association for Computational Linguistics: EMNLP 2020*, pages 4948–4961.

Ritesh Kumar, Atul Kr Ojha, Shervin Malmasi, and Marcos Zampieri. 2018. Benchmarking aggression identification in social media. In *Proceedings of the first workshop on trolling, aggression and cyberbullying (TRAC-2018)*, pages 1–11.

Prasanna Kumar Kumaresan, Ratnasingam Sakuntharaj, Sajeetha Thavareesan, Subalalitha Navaneethakrishnan, Anand Kumar Madasamy, Bharathi Raja Chakravarthi, and John P McCrae. 2021. Findings of shared task on offensive language identification in tamil and malayalam. In *Forum for Information Retrieval Evaluation*, pages 16–18.

Savannah Larimore, Ian Kennedy, Breon Haskett, and Alina Arseniev-Koehler. 2021. Reconsidering annotator disagreement about racist language: Noise or signal? In *Proceedings of the Ninth International Workshop on Natural Language Processing for Social Media*, pages 81–90.

Maimaitituoheti and Abulimiti. 2022. Ablimet@lt-ediacl2022: A roberta based approach for homophobia/transphobia Detection in Social Media. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Edison Marrese-Taylor, Jorge A Balazs, and Yutaka Matsuo. 2017. Mining fine-grained opinions on closed captions of youtube videos with an attention-rnn. *arXiv preprint arXiv:1708.02420*.

Hala Mulki and Bilal Ghanem. 2021. Let-mi: An arabic levantine twitter dataset for misogynistic language. *arXiv preprint arXiv:2103.10195*.

Skanda Muralidhar, Laurent Nguyen, and Daniel Gatica-Perez. 2018. Words worth: Verbal content and hirability impressions in youtube video resumes. In *Proceedings of the 9th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis*, pages 322–327.

Anitha Narasimhan, Aarthy Anandan, Madhan Karky, and CN Subalalitha. 2018. Porul: Option generation and selection and scoring algorithms for a tamil flash card game. *International Journal of Cognitive and Language Sciences*, 12(2):225–228.

Ruba Priyadharshini, Bharathi Raja Chakravarthi, Subalalitha Chinnaudayar Navaneethakrishnan, Thenmozhi Durairaj, Malliga Subramanian, Kogilavani Shanmugavadivel, Siddhanth U Hegde, and Prasanna Kumar Kumaresan. 2022. Findings of the shared task on Abusive Comment Detection in Tamil. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Ruba Priyadharshini, Bharathi Raja Chakravarthi, Sajeetha Thavareesan, Dhivya Chinnappa, Durairaj Thenmozhi, and Rahul Ponnusamy. 2021. Overview of the DravidianCodeMix 2021 shared task on sentiment detection in Tamil, Malayalam, and Kannada. In *Forum for Information Retrieval Evaluation*, pages 4–6.

Ruba Priyadharshini, Bharathi Raja Chakravarthi, Mani Vegupatti, and John P McCrae. 2020. Named entity recognition for code-mixed Indian corpus using meta embedding. In *2020 6th international conference on advanced computing and communication systems (ICACCS)*, pages 68–72. IEEE.

Manikandan Ravikiran, Bharathi Raja Chakravarthi, Anand Kumar Madasamy, Sangeetha Sivanesan, Ratnavel Rajalakshmi, Sajeetha Thavareesan, Rahul Ponnusamy, and Shankar Mahadevan. 2022. Findings of the shared task on Offensive Span Identification in code-mixed Tamil-English comments. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Ratnasingam Sakuntharaj and Sinnathamby Mahesan. 2016. A novel hybrid approach to detect and correct spelling in Tamil text. In *2016 IEEE International Conference on Information and Automation for Sustainability (ICIAfS)*, pages 1–6.

Ratnasingam Sakuntharaj and Sinnathamby Mahesan. 2017. Use of a novel hash-table for speeding-up suggestions for misspelt Tamil words. In *2017 IEEE International Conference on Industrial and Information Systems (ICIIS)*, pages 1–5.

Ratnasingam Sakuntharaj and Sinnathamby Mahesan. 2021. Missing word detection and correction based on context of Tamil sentences using n-grams. In *2021 10th International Conference on Information and Automation for Sustainability (ICIAfS)*, pages 42–47.

Anbukkarasi Sampath, Thenmozhi Durairaj, Bharathi Raja Chakravarthi, Ruba Priyadharshini, Subalalitha Chinnaudayar Navaneethakrishnan, Kogilavani Shanmugavadivel, Sajeetha Thavareesan, Sathiyaraj Thangasamy, Parameswari Krishnamurthy, Adeep Hande, Sean Benhur, Kishor Kumar Ponnusamy, and Santhiya Pandiyan. 2022. Findings of the shared task on Emotion Analysis in Tamil. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Margaret S Schneider and Anne Dimito. 2010. Factors influencing the career and academic choices of lesbian, gay, bisexual, and transgender people. *Journal of homosexuality*, 57(10):1355–1369.

R Srinivasan and CN Subalalitha. 2019. Automated named entity recognition from tamil documents. In *2019 IEEE 1st International Conference on Energy, Systems and Information Processing (ICESIP)*, pages 1–5. IEEE.

C. N. Subalalitha. 2019. Information extraction framework for Kurunthogai. *Sādhanā*, 44(7):156.

CN Subalalitha and E Poovammal. 2018. Automatic bilingual dictionary construction for Tirukural. *Applied Artificial Intelligence*, 32(6):558–567.

Krithika Swaminathan, Hrishik Sampath, Gayathri G L, and B Bharathi. 2022. Ssncse_nlp@lt-edi-acl2022: Homophobia/transphobia detection in multiple languages using Svm classifiers and Bert-based Transformers. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Sajeetha Thavareesan and Sinnathamby Mahesan. 2019a. Sentiment analysis in tamil texts: a study on machine learning techniques and feature representation. In *2019 14th Conference on Industrial and Information Systems (ICIIS)*, pages 320–325. IEEE.

Sajeetha Thavareesan and Sinnathamby Mahesan. 2019b. Sentiment analysis in Tamil texts: A study on machine learning techniques and feature representation. In *2019 14th Conference on Industrial and Information Systems (ICIIS)*, pages 320–325.

Sajeetha Thavareesan and Sinnathamby Mahesan. 2020a. Sentiment lexicon expansion using word2vec and fasttext for sentiment prediction in tamil texts. In *2020 Moratuwa Engineering Research Conference (MERCon)*, pages 272–276. IEEE.

Sajeetha Thavareesan and Sinnathamby Mahesan. 2020b. Sentiment lexicon expansion using Word2vec and fastText for sentiment prediction in Tamil texts. In *2020 Moratuwa Engineering Research Conference (MERCon)*, pages 272–276.

Sajeetha Thavareesan and Sinnathamby Mahesan. 2020c. Word embedding-based part of speech tagging in Tamil texts. In *2020 IEEE 15th International Conference on Industrial and Information Systems (ICIIS)*, pages 478–482.

Sajeetha Thavareesan and Sinnathamby Mahesan. 2021. Sentiment analysis in Tamil texts using k-means and k-nearest neighbour. In *2021 10th International Conference on Information and Automation for Sustainability (ICIAfS)*, pages 48–53.

Crispin Thurlow. 2001. Naming the "outsider within": Homophobic pejoratives and the verbal abuse of lesbian, gay and bisexual high-school pupils. *Journal of adolescence*, 24(1):25–38.

Sanjeev Upadhyay, Srivatsa Ishan, Aditya KV, and Radhika Mamdi. 2022. Sammaan@lt-edi-acl2022: Ensembled transformers against Homophobia and Transphobia. In *Proceedings of the Second Workshop on Speech and Language Technologies for Dravidian Languages*. Association for Computational Linguistics.

Konthala Yasaswini, Karthik Puranik, Adeep Hande, Ruba Priyadharshini, Sajeetha Thavareesan, and Bharathi Raja Chakravarthi. 2021. IIITT@DravidianLangTech-EACL2021: Transfer learning for offensive language detection in Dravidian languages. In *Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages*, pages 187–194, Kyiv. Association for Computational Linguistics.