My Portfolio
git-profile

Prasanna Biswas

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Employment

Research Assistant **IIT-Bombay** **August'20 – Ongoing**

Understand Emotions in Sarcasm: A Multi-modal Approach

- Working with IBM-AIHN network on studying the Effect of Sarcasm in Emotion Analysis using a **Multi-Modal Meta-Learning** framework.
- Leveraging the audio modality using self-supervised learning-**PASE**, unsupervised learning-**wav2vec**.

Teaching Assistant **IIT-Bombay** **July'18 – July'20**

- Courses: Computer Programming and Utilization, Embedded Systems.
- Promoted to Senior TA in July'19; led weekly meetings and supervised five other TAs.

Publication

Home Automation Using Panoramic Image Using IoT

- Published in 2018 International Conference on Recent Innovations in Electrical, Electronics Communication Engineering (ICRIEECE).

Education

Mumbai, IN **IIT-Bombay** **July'18 - July'20**

- M.Tech in Computer Science and Engineering, July 2020. CPI: **8.43** (on scale of 10).
- Graduate Coursework: Foundations in Machine Learning; Advance Machine Learning; Mathematics for Visual Computing; Combinatorics; Algorithms and Complexity; Relational Databases.

Mumbai, IN **University of Mubai** **June'14 – June'18**

- B.E. in Computer Engineering, June 2018. CPI: **9.07** (on scale of 10).
- Undergraduate Coursework: Operating Systems; Databases; Data Structures and Algorithms; Programming Languages; Applied Mathematics; Computer Networks; Theory of Computer Science.

Master Thesis

Computational Model to Understand Emotions in Sarcasm

- Created dataset 'emo-UStARD' by annotating 'MUStARD' with 8 primary emotions,arousal & valence values.
- Conducted experiments exploring every aspect of textual modality & observed **18% increase in accuracy score** in multi-label Emotion Prediction when additional information is passed. (**EMNLP'2020** Submission)

Other Technical Projects

- **Investigating importance of Emojis in Sarcasm Detection (2019)**: Incorporated the features from *knowledge graphs* in modelling the problem. The accuracy for the tweets were close to 90%. using emojis.
- **Insincere Question detection in Quora (2019)**: Used and tested state-of-the-art BERT and ELMo to obtain question representations achieved an F-score of 0.60.
- **Movie Recommend System (2018)**: Modelled this problem as *collaborative based filtering* using IMDB dataset.
- **Term Deposit Subscription Prediction**: Analyzed the data using **Spark Dataframes**.Modelled this binary classification problem using Logistic regression available in MLlib of PySpark.

Languages and Technologies

- C++; C; Python; SQL; HTML; JavaScript; Git.
- PyTorch; Django; Wordnets; EmojiNet; LIME Interpretation; PySpark; Hadoop(Limited Exposure)

Additional Experience and Awards

- **Flipkart Grid (2019):** Secured 4^{th} position within the campus.
- **Second Prize, Inter-College Project Competition 2018** at St.Francis Institute of Technology,Mumbai.