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EDUCATION

IIIT Delhi

August 2020 - Present

PhD Scholar, Computer Science and Engineering

Advisors: Dr. Md. Shad Akhtar & Dr. Tanmoy Chakraborty

Topic: Harnessing Trust in Counselling Conversations for Virtual Mental Health Assistants

Kamla Nehru Institute of Technology, Sultanpur

August 2016 - July 2020

Bachelor in Technology (BTech)

Computer Science and Engineering, 73.66%

PUBLICATIONS

Counseling Summarization using Mental Health Knowledge Guided Utterance Filtering

Full Paper accepted at KDD'22

Aseem Srivastava, Tharun Suresh, Sarah Peregrine (Grin) Lord, Md. Shad Akhtar, Tanmoy Chakraborty

We collected and annotated a corpus of mental health counseling conversation with corresponding summaries and topic labels. Further, we designed a deep-learning model to generate natural language dialogue summaries. We also presented a novel evaluation metric, MHIC to qualitatively assess the generated summaries.

A Computational Approach to Understand Mental Health from Reddit: Knowledge-aware Multitask Learning Framework — Full Paper accepted at ICWSM'22

Usha Lokala, **Aseem Srivastava**, Triyasha Ghosh Dastidar, Tanmoy Chakraborty, Md Shad Akhtar, Maryam Panahiazar, Amit Sheth

We collect a corpus of 150k items (both posts and comments) on Reddit annotated using the subreddit labels and transfer learning approaches. We propose GeM, a novel task-adaptive multi-task learning approach to identify the mental health symptoms in cardiovascular disease (CVD) patients based on gender.

Speaker and Time-aware Joint Contextual Learning for Dialogue-act Classification in Counselling Conversations — Full Paper accepted at WSDM'22

Ganeshan Malhotra, Abdul Waheed, **Aseem Srivastava**, Md. Shad Akhtar, Tanmoy Chakraborty

We proposed a novel model named, SPARTA, to create speaker- and time-aware representations to aim for the task of dialogue-act classification on self-annotated novel social counseling dataset containing therapist-patient conversation. Our novel model beat the previous SOTA models by 5% F-Score

EXPERIENCE

Analytics Vidhya

June 2019 - July 2019

Data Science Intern

Gurgaon

- Research and development of Machine Learning and Deep Learning models to create world's largest Data Science portal: DataMin

- Led the team for the better understanding of concepts involved in Deep Neural Network.

Atventus India

Web Developer Intern

June 2017 - August 2017

Lucknow

- On-site internship where I worked on various projects using frameworks like Codeigniter, NodeJS along with database schema designing and EC2 server management.

SKILLS

Research	NLP - Dialogue Systems, Conversational AI, Deep Learning, Machine Learning
Frameworks	Pytorch, Jupyter Notebook, Git, AWS
Web & Android	NodeJS, Flutter, MySQL, NoSQL
Soft Skills	Communication Skills, Problem Solving, Critical Thinking, Research Attitude

PROJECTS & RESEARCH

Conversation Summary Generation - A transformer architecture

Worked using the PEGASUS library by Google Research pre-trained on huge text corpus for summary generation. We tuned the model for AMI meeting conversation dataset to generate summary and managed to get a ROUGE score of 41 along with good semantics.

Few Shots Intent Detection in Conversation - BERT classification approach

In the case of lack of data/dialogues where responses highly depend upon the intents of the user, an Intent Classifier is built using Few-Shot learning and BERT based classification that minimizes the obstacle of limited data.

Amazon Product Rating Prediction - A classical machine learning approach

The project aims at rating prediction using only reviews of products that were commented under the product list. In my third-year NLP project as well as my research paper, I have implemented several ML algorithms to extract several accuracies with the highest being 92.3%

Facebook Friend Recommendation - Social Media Link Prediction

Worked on cold-start feature engineering problem where I created 28 new features using only follower-follower relationship. I managed to predict links with 92.4% accuracy.

Netflix Movie Recommendation Engine

Built a recommendation engine on Netflix's dataset where I applied baseline algorithms along with XGBoost in stack fashion to leverage recommendation results.

Self Driving Car Steering Angle Prediction

Successfully built, a regression based solution for steering angle prediction and developed a simulator to a food ordering application for android and iOS users using Flutter Framework of Google. It has been tested and deployed over play-store with 500+ downloads and zero percent crash-report till now.

COURSES & MOOC

- Certified in *Data Science In Python* from University Of Michigan via Coursera
- Certified in *Text Retrieval and Search Engines* from University of Illinois via Coursera

ACHIEVEMENTS

- Runners up in Facebook's Digital Masala Hackathon for creating innovative web platform and won Rs.40,000 in 2018
- Placed in top 9% of leaderboard in IIT-M Alumni Association Hackearth's ML-challenge with more than 8000 participants along with accuracy of 99.636% on test data
- Placed in top 10% of leaderboard in ZS ML-Hackathon on InterviewBit with accuracy 89.99%

POSITIONS OF RESPONSIBILITY

- Web Chair - CONSTRAINT Workshop (Collocated with ACL 2022), ACSS Workshop 2021
- Volunteer - AAAI 2021, COLING 2020, *[December '20]*
- Mozilla Campus Club, Campus Lead - *[December '16 - December '17]*
- Organizing Committee member of 2nd International Conference on Advanced Computing and Software Engineering (ICACSE 2019) - *[February '19]*