JALEND BANTUPALLI

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RESEARCH INTERESTS

AI & IR: Natural Language Processing, Vision-language models, Machine Learning, Cross-lingual Retrieval

EDUCATION

Indian Institute of Technology, Kharagpur 2018 - 2022
B.Tech, Major in Electronics and Electrical Communication Engineering **9.45/10**
Minor in Computer Science and Engineering **9.56/10**
FIITJEE Junior College 2018
Andhra Pradesh Board of Intermediate Education **97.8%**
Timpany School 2016
Indian Council for Secondary Education (ICSE) **97.8%**

CONFERENCE PUBLICATIONS

Social Informatics 2022

- Vahini Medidoddi, **Jalend Bantupalli**, Souvic Chakraborty, Animesh Mukherjee. "Decoding Demographic un-fairness from Indian Names" - paper accepted to be published in the 13th International Conference on Social Informatics, 2022.

RESEARCH EXPERIENCE

Sarcasm Detection — Bachelor's Thesis Project II February'22 - June'22
Prof. Animesh Mukherjee ***Technologies and Tools:*** *Python, Deepface*

- Explored the conversations in "The Big Bang Theory", an American television sitcom to detect sarcasm in speech.
- Classified the speech as sarcasm based on contextual parameters like speakers, the emotion of the characters present and presence of a laughter track during the speech drawn from the sitcom dataset.
- Developed a model using transfer learning to obtain an F1-Score close to 75 on labeled twitter data.

Name-based Classification — Bachelor's Thesis Project I August'21 - February'22
Prof. Animesh Mukherjee ***Technologies and Tools:*** *Python, Twitter API Tools*

- Created a new dataset of Indian names labeled with gender and caste to aid in classification tasks.
- Developed models for gender and caste classification and tested their generalizability using cross-data setting.
- Analysed the trends in bias against women and backward castes in education registrations and social media.

Rumor and Stance Classification on PHEME-RNR Dataset September'21 - November'21
Prof. Saptarshi Ghosh — IR Term Project ***Technologies and Tools:*** *Python, SNAP, NLTK*

- Incorporated stance classification in Tree LSTM-based rumor detection model from the research paper,"Going Beyond Content Richness: Verified Information Aware Summarization of Crisis-Related Microblogs" and improved the accuracy of prediction by 2 percent
- Preprocessed PHEME dataset to match the relevant features in the model from "Cascade-LSTM: A Tree-Structured Neural Classifier for Detecting Misinformation Cascades".
- Detected misinformation in the PHEME Dataset by using the Cascade-LSTM model.

Combatting Online Hostile Posts in Regional Languages February'21 – April'21
Prof. Bivas Mitra — Complex Networks Term Project ***Technologies and Tools:*** *Python*

- Explored the role of Twitter-based religious organizations in spreading hatred and focused on a variety of hostile posts in Hindi Devanagari Script.
- Created a new dataset for the hostility detection task and developed a model to classify hate speech.

- Created a complex network of the followers of a Twitter organization to study the retweeted hostile posts.
- Formulated a metric called hate score based on the number of retweets to study the hate spread in a community.

INDUSTRIAL EXPERIENCE

Google India Pvt. Ltd., Bengaluru, India July'22 - Present
Software Engineer ***Technologies and Tools:*** *C++, Python*

- C++ and Python developer working on improving switch reliability as part of the Networking team.
- Researched and designed black hole detection in networks and implemented it in our team's switches.
- Performed network maintenance and system upgrades including vulnerability fixes and security configurations.

Microsoft India (R&D) Pvt. Ltd., Hyderabad, India May'21 - July'21
Software Engineer Intern ***Technologies and Tools:*** *Microsoft Dynamics CRM, JavaScript*
Project: **Config Entity Framework — Microsoft Dynamics CRM**

- Developed a new Config entity in Microsoft Dynamics CRM that stores all configurations of an entity as records, helping in avoiding unmanaged customizations post-production.
- Designed the entity as a centralized system, which removed the need to change the configurations across multiple web resources.
- Removed the dependency on release for onboarding pilot features and reduced the waiting time to a single flip in the entity.

COURSES (GRADE)

Algorithms-I (10) — Programming and Data Structures (10) — Principles of Programming Languages (10) — Probability and Stochastic Processes (9) — Digital Electronics Circuits (9) — Foundations of Entrepreneurship (10) — Deep Learning (10) — Machine Learning (10) — Big Data Processing (9) — Natural Language Processing (9) — Image Processing (10) — Matrix Algebra (9) — Information Retrieval (10) — Complex Networks (10) — Data Structure & Object Representation (9) — Computer Architecture and Operating System (10)

AWARDS AND ACHIEVEMENTS

- Secured **Highest CGPA(10/10)** in the first semester at IIT Kharagpur.
- Secured All India Rank **1603** in JEE advanced 2018 and All India Rank **1137** in JEE main 2018.
- Peak Rating in Codeforces (@jb15): **1787** — Codechef (@jalend15): **2087**.
- Secured Andhra Pradesh **State Rank 1** in ICSE Board, 2016 with 97.8%.

SKILLS

- **Programming Languages:** C, C++, Python, JavaScript, Octave, Java
- **Utilities & Libraries :** Android Development, Git, Microsoft Dynamics CRM, REST API, SQL
- **Environments & Libraries :** ROS, MATLAB, OpenCV, Selenium, Pytesseract, PyTorch, TensorFlow

MENTORSHIP AND OUTREACH

Student Mentor at Student Welfare Group, IIT Kharagpur September'20 - May'21

- Mentored three students of the junior batch, acting as the first step for all their academic and personal doubts.
- Selected as a mentor by peer review, a team of 160 members out of 600 applicants.

EXTRA-CURRICULAR ACTIVITIES

- Part of NSO Volleyball and participated in InterHall Volleyball Competition in the General Championship.
- Participated in the Model United Nations as a representative of Bahrain.