

Anjali Raj

4th Year Undergraduate

Electronics and Electrical Communications | Computer Science (minor)

[Github](#)

[Linkedin](#)

ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute	CPI/%
2020-2024	B.Tech	Indian Institute of Technology, Kharagpur	9.23/10(Major) 9.76/10(Minor)
2019	CBSE(XII)	Remal Public School,Rohini, New Delhi	92.6%
2017	CBSE(X)	B.R.DAV Public School	10/10

PUBLICATIONS

- **Anjali Raj**, Shikhar Bharadwaj, Srigana, Min Ma, Shikhar Vashisth (under **Google Research India**): **MASR: Metadata Aware Speech Representation**. Accepted at **IEEE ASRU'2023**(Automatic Speech Representation and Understanding) conference to be held in **Taiwan**.
- **Anjali Raj***¹, Pratham Goyal*², Puneet Kumar and Kishore Babu: **Automatic Evaluation of Machine Generated Feedback For Text and Image Data**. Presented in **MCAUIS IEEE MIPR** (Multimedia Information Processing and Retrieval) Conference 2022.

SCHOLASTIC ACHIEVEMENTS

- Selected for **McKinsey** Next Generation Women Leader'23 APAC Program out of more than 10k applicants.
- **Women Possibilities Summit Finance'23**: amongst top 50 delegates from all over India invited for the Finale event by **Goldman Sachs**.
- Invited for **Data Summer Invitational Datathon'22** by **Citadel**.
- Student Attendee at **Hudson River Trading BIPOC Tech Summit'22**.
- **Harvard WEAmplify Scholar'23**: Offered scholarship to attend the largest student-run Women in Computer Science conference in the US.
- **Micron GWMP Scholar'23**: Amongst top 200 girls selected globally | Mitacs GRI'23 Scholar at York University, Canada
- **Desis Ascend Educare'22** : Amongst top 40 third year girls across India selected for Desis Ascend program by D.E.Shaw.
- **Google Code Jam to I/O'22** : Amongst top 150 students to receive the free ticket to attend I/O conference by Google. **Global Rank: 80**
- Top **600** students invited for JumpStart by Publicis Sapient | Top **60** students invited for All India CodeToGive Hackathon by **Morgan Stanley**
- **VMware CodeHouse'22** All India Hackathon Winner(Team HERcules) & **CodeHouse'22** Attendee: Amongst 40 girls selected across India.
- **Microsoft Engage'22** Amongst the top **200** students selected out of 2.5 lacs students to receive direct SWE internship'23 offer.
- **Amazon Wow'22** Amongst the top **100** students selected across India to receive 6-months SWE internship'23 offer.
- **Uber STAR'22 Scholar**: Amongst top **6** girls offered internship at Uber & **Uber She++'22 Winner**: Top 75 girls selected across India.
- Received Department change with a **GPA** of 9.87 in first year | Department Rank **7** out of 170 students.
- Amongst top **0.01%** students in JEE Advanced'20 among 2.5 Lakh shortlisted candidates
- Secured a percentile of **99.61%** out of 1.5 million JEE Mains'20 applicants.
- Amongst top 300 students from Bihar to qualify **NTSE'17** Stage1 | AIR 1: Talent Hunt Olympiad'16 | Received **STAR** Performer Award

WORK EXPERIENCES

- **Google India | Bangalore | Google Research: Natural Language Understanding | SWE Intern** (May'23- Jul'23)
 - Integrated soft-similarity of languages using lang2vec distances which increased accuracy and F1 score by **7%** on FLEURS dataset.
 - Added meta-data head of loss computation from speech transcripts for speech-only models to enable semantic learning.
 - Submitted paper titled MASR(Metadata Aware Speech Representation) to **ASRU**(Automatic Speech Recognition and Understanding)
- **DE Shaw & Co | Hyderabad | DESIS ASCEND Fellowship | Moncierge** (Oct'22- Apr'23)
 - Developed a management system for a food delivery app to store, manage and explore different restaurants.
 - Designed an ER model and translated the model to the relational schema for a management system of the same.
 - Integrated a delivery system supporting different payments and discount options through razorpay payment gateways.
 - Used MySQL queries to fetch firebase information and added notifications using Gmail Authentication API in firebase verification.
- **Google India | Bangalore | TVOD Engineering Team | SWE STEP Intern** (May'22- July'22)
 - Developed Remote Procedure Call interface in backend and frontend Argon server for creating and fetching Input Avail Set.
 - Completed unit-testing for RPC Actions and Request-Validator using mock-service API's, HTTP Rules and Promise Graph.
 - Integrated Validation UI components using Angular and JasmineAPI to generate process-request and push status to queue.
- **Carnegie Mellon University | Pittsburg | Prof. Jack Mostow | Research Intern** (Apr'22- June'22)
 - Prototyped and compared the similarities between successive words via edit distance and the values obtained via percentiles.
 - Modeled placement mode escape time with replacement options of scaffolding, feedback and visual representation.
 - Analysed the performance of each metric on sentence prediction task using English translations of coherent pairs.
- **Microsoft India | Engage Mentorship | Face-Recognition Application for Device Security** (May'22- Jun'22)
 - Developed a browser-based application exploiting the application of Face Recognition technology using Angular.
 - Created a face login feature to validate user info by deploying LoginTime comparator and counter for current logins.
 - Generated face landmarks and facial details along with confidence scores by integrating Face Recognition API.

COMPETITIVE PROGRAMMING & EXTRA-CURRICULAR ACTIVITES

- **Global Ranks**: Google CodeJam to I/O'22 **80** | CodeJam to I/O'21 **590** | Google KickStart'22 Round D **973** | KickStart'22 Round H **820**.
- **Global Ranks**: Starters 82 Division 2 **18** | Educational Codeforces Round 129 **322** | Codeforces Round 824 (Div.2) **708**
- Codechef max rating:**1944** 4 star | Codeforces max rating: **1561** Specialist |**All India 3rd** in CodeNite'21

PROJECTS

- **Microsoft India | Microsoft Academic Partnership Grant 2023 | Document Segmentation | B Tech Project** (Aug'23- Ongoing)
 - Implemented Segmentation on Document Images for Mobile Devices using Detectron2 architecture by Facebook and mobile ViT.
 - Generated iso-thetic covers for Doclay and Publay datasets which improved the Jaccard Score by 7%.
- **Automatic Feedback Evaluation of Twitter dataset | Prof.R.Balasubramanian | IIT Roorkee** (July'21- May'22)
 - Implemented LSTM, BiLSTM RNN's along with textual self-attention to extract semantic features via multi-hopping.
 - Extracted object level visual features using the pretrained **faster RCNN** model for fine detection and visual attention.
- **Multiplayer Casino server | Research Group KRSSG | IIT Kharagpur** (July'21- Dec'21)
 - Built a multi-round casino server for multiple clients which supported interaction using Multithreading and Socket programming.
 - Encoded and Decoded the dynamic display of the game status at each round as instructed by the client.
- **COVID-19 detection from ChestX-Ray images | Prof.Jayanta Mukhopadhyay | IIT Kharagpur** (July'21- Dec'21)
 - Performed **transfer learning** and finetuned feed forward layers of Resnet-50 on upsampled Covid19 ChestX-Ray images.
 - Built a robust COVID sensitive pipeline consisting of light-weight design pattern(**PEPX**) using pytorch framework.

TECHNICAL SKILLS

- **Programming:** C, C++, Python, Java, SML, SQL, Bash, Git **Development:** HTML, CSS, Java Script, Typescript, Angular
- **Frameworks/Libraries:** Numpy, Pandas, Scipy, ScikitLearn, Tensorflow, Pytorch, Spacy, nltk, OpenCV, Flutter • **OS:** Windows, Linux

RELEVANT COURSES

Natural Language Processing	Object Oriented Programming	Probability & Statistics	Computer Architecture	Calculus
Machine Learning	Data Structures & Algorithms	Linear Algebra	Algorithmic Game Theory	DBMS