

EDUCATION

Ajay Kumar Garg Engineering College, Uttar Pradesh, India
B.Tech in Electronics and Communication Engineering

August 2019 – 2023
CGPA : 8.4/10

EXPERIENCE

Dubverse.ai, Gurgaon, India | DL Engineering Intern

January 2023 - July 2023

- Accomplished rise of **25%** and **30%** in usage frequency and average session duration respectively by optimising the deployed **TTS Cross-Lingual Voice Cloning** model by **plotting graphs** between reference transcript and spectrogram-energy-frequency of generated speech for locating misaligned portions in generated speech, conducting experiments to achieve **few-shot cloning**, and adding language-specific and RegEx rules to lower Phoneme Error Rate by **9%**.
- Scaled optimized model to **4 new languages** by training on **200+hrs of data** over Google Cloud Platform (GCP).

Google Summer of Code' 22 @ GAA, EMBL-EBI, United Kingdom | [Project Page](#)

June 2022 - September 2022

- Reduced data curation time by **40%** by developing **OligoFinder**, an open-source module based on **BioBERT** model fine-tuned for Name Entity Recognition to automatically extract Oligonucleotides from research papers.
- Developed active-learning pipeline using RegEx, NLTK and BOWs to curate dataset of **7000 pairs of sentence** and oligo mentions for fine-tuning and evaluation. Resultant model achieved **Precision: 0.92, Recall: 0.93** and **F1: 0.92**.

Wow Labz, Bangalore, Karnatka, India | Data Science Intern

January 2022 - July 2022

- Implemented **GAN-based Lip-synching** system trained on custom-made Indian speakers dataset to achieve Lip Sync Error Distance of **6.512** that creates lip movements based on dubbed audio.
- Designed Flask-based **Two-staged Resume Parsing** webapp PoC that uses **YOLOv5** to extract **6 segments** from resumes and **spaCyV3's RoBERTa** fine-tuned for NER to extract **10 key information** from segments with a mAP of **0.783** and test accuracy of **53.97%**. Used Beautiful Soup to scrape **~4000 resumes** for fine-tuning and validation.

DRDO, New Delhi, India | Data Science Intern | Supervisor: Dr. Mohd Yousuf Ansari

June 2022 - July 2022

- Developed a facial recognition-based **Person Auto-tagging** system which labels renowned personalities across a large number of unlabeled photographs stored at Digital Library of DESIDOC, DRDO.
- Architecture inspired by **MTCNN** and **Facenet** algorithms achieved **94%** and **98%** accuracies in face detection and recognition tasks respectively and is deployed using **Flask**.

Erevna Enterprises Private Limited, UP, India | Machine Learning Intern

January 2021 - February 2021

- Integrated face recognition-based **feature of Automated Connection Invite Sender** to the existing travelling mobile application.
- Reduced the average time spent by **53%** by allowing users to automatically search for a person based on his/her photograph and sending a connection request.

PROJECTS

Describer | [GitHub](#) | Flask-based image captioner with BLEU-1 score of 0.47 using InceptionV3 and LSTM.

ShortRead | [GitHub](#) | Tf-Idf and word probability-based article summarizer that reduces the avg reading time by 78%.

TalkingHand | [GitHub](#) | VGG16-based hand gestures classifier with train accuracy of 94.2% and test accuracy of 84.5%.

ADDITIONAL EXPERIENCES AND ACHIEVEMENTS

- Attended 5-days **Short Term Course on Computer Vision and Intelligent Applications 2023** at NIT Kurukshetra.
- Participated in 3-days **Artificial Intelligence Summer School (AISS) 2023** organized by Infosys CAI, IIIT-Delhi.
- Second runner-up at **Plan2Hack 2022** conducted by Bharati Vidyapeeth's College of Engineering, New Delhi.
- National-level finalist at **Smart India Hackathon 2022** and State-level finalist at **Smart India Hackathon 2020**.
- Among the top-5 finalists in **IoT Challenge 2020** at UPES, Dehradun, in association with Aakaar'20 IIT Bombay.
- First position for Technical Poster Making at **Dr. Abdul Kalam Technical, Literary and Management Fest'19**.
- Mentored students at **Google Developer Student Club** and at **ECE department, AKGEC**.
- Participated in 2-days **Workshop on IoT 2019** at IIT Roorkee organized by ROBOTech Labs.
- Second position for research poster presentation at **SCROLLS'19** (technical poster presentation competition).

SKILLS

Research Interests: Deep Learning, Computer Vision, Natural Language Processing, Generative AI

Language, Frameworks, Tools: Python, Keras, Tensorflow, PyTorch, Flask, Git, Postman, TensorBoard, NLTK, PuTTY, Audacity, OpenCV, Scikit-Learn, GCP, NumPy, Pandas, BeautifulSoup