ADITYA RAGHUVANSHI

# Computer Science and Linguistics Student

# EDUCATION

## B.Tech. Computer Science and MS (by research) in Computa- tional Linguistics

International Institute of Information Technology, Hyderabad

Sep 2021 – Present (4th year) Hyderabad, India

## Current CGPA: 7.79/10 Higher Secondary Education GVN, The Global School

2019 – 2021 Bhopal, India

# EXPERIENCE

## Cognitive Science Lab: Undergraduate Researcher

May 2021 – Present IIIT Hyderabad, India

## DASS

Implemented website functionality using MERN stack, Redux, Bootstrap, and Axios for seamless user experiences.

Applied prompt tuning to GPT-2 small model using PyTorch, enhancing responsiveness and versatility across tasks. Opti- mized the model’s performance for three specific applications: Machine Translation, Summarization, and Question Answer- ing.

Natural Language

Research

Music Information Retrieval

Processing - AI

Researched with Dr Vinoo Alluri, Analyzed emotional conveyance in 1700 songs using advanced source separation, pretrained audio and text models, and statistical analyses. Examined individual and col- lective impacts of musical elements on perceived emotions across the valence-arousal space.

## TCS Research: Research Intern

Spearheaded an innovative team project in sarcasm detection that employed advanced NLP techniques, including BiLSTM, Transformers, and fine-tuning with BERT/T5/MPNET.

Achieved remarkable results, outperforming numerous state-

2024 –

India

of-the-art models and establishing the project as a benchmark in the field of natural language processing.

Implementing a multi-stage pipeline incorporating user profiling, preference modeling, and AI-driven music synthesis using softwares like Employing state-of-the-art source separation techniques like Spleeter for isolating musical components, and extracting high-level features using librosa, Integrating AIVA and Facebook MusicGen APIs for diverse compositional styles and genre-specific generation and then combining them together.

This system aims to revolutionize personalized music experiences by dynamically adapting to user preferences and environmental contexts.

## Become ( Frozen Iris ) : Computational Linguistic Researcher

April 2024 - June 2024 Chennai, India

## Operating Systems Networks

Designed and developed a Distributed File System from scratch as part of a collaborative team project. Enhancing net- work eﬃciency and providing clients with comprehensive file system interaction capabilities.

## Natural Language Pro- cessing - AI

Designed an Advanced NLP project focused on sentence sim-

## Linguistics

Research

ilarity, utilizing state-of-the-art architectures such as Trans-

Collaborated with FMCG leader Himalaya to architect and imple- ment their responsive web platform. Spearheaded the development of HimalayaGPT, a bespoke AI-driven customer interaction system, utilizing OpenAI’s GPT-3.5 API and fine-tuning techniques for per- sonalized responses for consumers.

Led the Nomencapture department as Linguistic Researcher, pio- neering a data-driven approach to global brand name rankings for 800+ brands.

## ChargeKartD7: Full Stack Developer

Jan 2023 – Aug 2023 Hyderabad, India

formers and BiLSTMs and achieved multi-lingual sentence similarity , with a particular emphasis on Indian languages.

## Database Management System: Data & Applications

Designed a database for a mini-world hosted on an application with a command line interface written in Python.

Incorporated fields with strong and weak entity types, modelled relational schemas, and converted relational model to normal forms.

JavaScript

React Native

# ACHIEVEMENTS / LEADERSHIP ROLES

Developed a WebApp and Admin control panel and contributed on developing a cross-platform Mobile App for customers to avail electric vehicle mobile charging services.

## Teenage Concerns: Co-Founder and COO

Nov 2021 – Jul 2022 Bhopal, India

Recipient of Deans Academic Award and Research Award for the previous spring semester of 2024 for outstanding aca- demic performance and excellent research capabilities.

Teaching Assistant for the course Behavioral Research and

## Mental Health

Team work

Experimental Design for the current Monsoon semester 2024.

Spearheaded the organization’s mission to address mental health issues in 750+ teenagers.

Successfully managed and collaborated alongside a team of 6 in- terns, assigning tasks and providing regular follow-up to ensure seamless operations.

Student Mentor at IIIT-H for DSA and CSO. Mentored 80+ students in these courses.

French A2 Diploma awarded by the French Ministry of Edu- cation via Alliance Française.

# EDUCATION

Bachelor of Technology in Computer Science and Engineering  
Lakireddy Bali Reddy College of Engineering, Andhra Pradesh  
2021 – Present  
CGPA: 7.93

# EXPERIENCE

Data Science Intern, Nullclass Inc. (Sep 2024 – Nov 2024):  
- Designed and implemented a GUI-based Gender Classification Project.  
- Applied data preprocessing and model evaluation techniques.  
  
IoT Intern, Siemens (Apr 2024 – Jun 2024, NIT-Warangal, India):  
- Developed solutions using TIA Portal for PLC programming.  
- Programmed KUKA robots and collaborated with cross-functional teams.  
  
Data Science Intern, Brain O Vision (Apr 2023 – Jun 2023):  
- Developed, deployed, and iterated a chatbot for help desk operations.  
- Worked on multiple Python projects.  
  
AWS Intern, Brain O Vision (Sep 2023 – Dec 2023):  
- Managed and optimized AWS cloud infrastructure.  
- Configured cloud services and monitored performance.

# PROJECTS

Age Detection Using Fine-Tuned CNN:  
- Fine-tuned the VGGFace model for age detection on the IMDB-WIKI dataset.  
  
Sign Language Detection:  
- Built a model for sign language prediction and recognition with a GUI for real-time video.  
  
IoT-Based Smart Home Automation:  
- Led a team to develop an IoT-based smart home automation system.

# ACHIEVEMENTS

- Best Service Student Award for organizing Lakshya event at LBRCE.  
- ₹25,000 merit-based scholarship by NSF (3 times).  
- Top 3 in a 24-hour Hackathon by Brain O Vision.  
- Secured prizes in 2 of 5 state-level hackathons.  
- 1st place in a technical presentation competition.

# LEADERSHIP & EXTRACURRICULAR ACTIVITIES

- President: Vigyana (AI/ML Club), LBRCE.  
- Vice President: Lakshya 2K23 (Techfest), LBRCE.  
- Project Lead: Final Year Project, LBRCE.

# SOFT SKILLS

Leadership, Decision Making, Teamwork, Creativity, Adaptability, Time Management, Ability to Work Under Pressure.