



Rahul Ramesh Omalur

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DOB: May 14, 2004

Address: A-131, Sobha Onyx, Bangalore - 560102



Education

Indraprastha Institute of Information Technology - Delhi

B.Tech(CSAI)
2022 – Present

CGPA: 8.67
(till 7th Semester)

Geetanjali Olympiad School, Bangalore

CBSE
2020 – 2022

Percentage: 95
(12th CBSE)

Delhi Public School East, Bangalore

CBSE
2010 – 2020

Percentage: 92.8
(10th CBSE)

Skills

Expertise Area Statistics & Data Visualization, APIs, Machine Learning, Deep Learning

Programming Language Python, Java, C++, C, SWI Prolog, HTML, PHP, SQL

Tools and Technologies Pandas, Jupyter Notebook, Google Colab, Robotics (ROS), APIs, Simple HTML Dom Parser, BeautifulSoup4, Laravel, Flask, Sci-Kit Learn, PyTorch, TensorFlow

Technical Electives Data Structures and Algorithms, Operating Systems, DBMS, Algorithm Design and Analysis, Advanced Programming, Computer Networks, Statistical Machine Learning, Machine Learning, Deep Learning

Internship

CodePlex Technologies Ltd.

(May, 24 – July, 24)

Guide: Ramesh Omalur

Assisted in the migration of data from legacy funeral home websites to modern platforms managed by Tribute Technologies Ltd. by developing and deploying web scraping tools using the PHP Laravel framework. Ensured accurate extraction and structured transfer of obituary and service information to new systems.

TCS R&I

(May, 25 – July, 25)

Guide: Dr. Karan Bhavsar

Preprocessed and analyzed ECG signals and patient metadata using libraries such as Pandas, scikit-learn, and PyTorch to develop predictive models for Coronary Artery Disease (CAD) in Indian patients, leveraging clinical datasets from hospitals across the country.

Projects

QUADRA - A Counterspeech Generation Model

(Jan,25 – May,25)
Team Size-2

Developed QUADRA, an intent-conditioned counterspeech generation framework using HateBERT and BART for controlled response generation. Explored fusion techniques (Linear, Cross Attention, Shared Fusion) to integrate hate speech and intent embeddings, and introduced DialoRank for zero-shot evaluation. QUADRA outperformed DialoGPT and GPS baselines across multiple NLP metrics for the NLP course offered by IIITD

SmartReach AI - Email campaign manager

(Jan,25 – May,25)
Team Size - 4

Developed SmartReach AI, a full-stack email marketing platform using Django and Next.js, featuring LLM-based content generation, regression-based send time optimization, and real-time analytics, while ensuring compliance with the DPDP Act (2023) for the SDOS(Software Development and Open Source) course offered by IIITD.

Automatic Music Transcription

(Sept,24 – May,25)

Guide : Anubha Gupta

Designed graph-based encoder-decoder architectures (PolyGraphAMT, GAT-AMT) using CNN-GRU encoders and GNN decoders (GATConv) to model temporal, pitch, and polyphonic relationships in piano music transcription. Achieved competitive results on benchmark datasets, improving frame and note-level accuracy over traditional baselines.

AI/ML Aided Cardiovascular Disease Prediction

(July,24 – Sept,24)
Team Size-2

Guide: Anubha Gupta

Developed AI/ML models for classifying Cardiovascular Diseases using 12 Lead ECG Data. Leveraged PyTorch and NeuroKit to create deep learning models, including Graph Neural Networks, for early detection and prevention.

Positions of Responsibility

- Undergraduate Researcher at SBILab (Aug,24 – May,25)
- Member of AudioBytes IIITD (Jan,23 – Present)

Interests and Hobbies

- Music
- Movies
- Sports

Declaration: The above information is correct to the best of my knowledge.

Rahul Ramesh Omalur

Date: July 1, 2025

