

# DODDA ABHIRAM

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## EDUCATION

### Gokaraju Rangaraju Institute of Engineering and Technology - Hyderabad, India

Bachelor of Technology in Computer Science and Engineering

December 2021 - Present

CGPA: 9.43

## EXPERIENCE

### IIIT Hyderabad

Research Intern

May 2024 – Present

- Conducting research on advanced information retrieval techniques, with a focus on extracting meaningful insights from large-scale judicial datasets.
- Working extensively on word embeddings to improve the representation of legal terminology, facilitating better data analysis and search accuracy.
- Developing and tested various evaluation methods to measure the effectiveness of information retrieval models.

### HarshanAI

Flask Developer Intern

March 2024

- Engineered backend infrastructure using the Python Flask web framework.
- Integrated a secure payment gateway, streamlining financial transactions within the system.
- Developed and optimized RESTful APIs to facilitate the integration of AI-driven features.

## PROJECTS

### InfluencerApp : Full-Stack Application for Influencer Management

Technologies Used: Flask, Vue.js, Celery, Redis, SQLite3, RESTful API, SQLAlchemy

- Developed a full-stack web application using Flask (backend) and Vue.js (frontend) for 3 roles (users).
- Implemented backend jobs using Celery and caching using Redis reducing API response time by 20%.
- Ensured secured authentication through JWT and RBAC.

### GroceryBasket : Grocery Management System

Technologies Used: SQLite3, SQLAlchemy, REST API, Flask, HTML5

- Designed and implemented both admin and user interfaces with RBAC login to control access levels.
- Ensured security with controller-level protections against SQL injection attacks and improved performance by 10%.

### FarmEase : Two-Stage Disease Classification System for Agricultural Use

Technologies Used: SQLite3, SQLAlchemy, TensorFlow, Flask

- Implemented a hierarchical image classification system for 38 plant diseases detection using a two-stage approach.
- Designed a novel Deep Convolutional Neural Network (CNN) architecture with transfer learning, achieving 97% accuracy.

## RESEARCH

### A Novel Two-Stage Deep Learning Framework for Plant Disease Detection

GCAT 2024, IEEE Conference, Status: Accepted

### A Novel Deep-Learning Based Classification of Skin Diseases

GCAT 2024, IEEE Conference, Status: Accepted

### Ensemble-Based Wine Quality Detection using Hybrid Machine Learning Models

International Journal of Engineering Research and Technology(IJERT), ISSN: 2278-0181, Vol. 13 Issue 01, August 2024

### Deep Learning and OCT Imaging: A Novel Ensemble Approach for Eye Disease Diagnosis

4th International Conference on Cognitive & Intelligent Computing (ICCIC-2024), Springer Conference, Status: Accepted

# Ensemble Approach for Blood Vessel Segmentation in Retinal Images: Comparing UNet and SegNet Models

4th International Conference on Intelligent Systems & Sustainable Computing ( ICISSC -2024), Springer Conference,  
Status: Communicated

## Text Summarization and Information Extraction

AIPCP 2024 Conference, Status: Accepted

## SKILLS

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**Languages:** C++, Java, Python, JavaScript, SQL

**Frameworks:** Flask, Django, Vue.js, TensorFlow

**Databases and Tools:** PostgreSQL, SQLite, Amazon Athena, Git, Postman

**Others:** AWS S3, AWS EC2, RESTful API, Data Structures and Algorithms, Linux, Machine Learning algorithms, Neural Network architectures, Transfer Learning, Image Processing, API Testing, Natural Language Processing, Information Retrieval

## ACHIEVEMENTS

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- Selected for and successfully completed Amazon ML Summer School 2024
- Academic Excellence Award 2021-22 from Gokaraju Rangaraju Institute of Engineering and Technology
- GRIET Merit endowment award for the year 2022-2023

## CODING PROFILES

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**Leetcode** - [leetcode.com/abhiramdodda](https://leetcode.com/abhiramdodda)

**Codechef** - [codechef.com/users/abhiramdodda](https://codechef.com/users/abhiramdodda)

**Github** - [github.com/AbhiramDodda](https://github.com/AbhiramDodda)

**Codeforces** - [codeforces.com/profile/Abhiram3363](https://codeforces.com/profile/Abhiram3363)

## CERTIFICATIONS

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- Harvard's CS50x: CS50's Introduction to Computer Science, EdX and HarvardX
- Foundational Certificate part of IIT Madras Online BS degree program in Data Science and Applications
- An Introduction to Programming through C++ by IIT Bombay, NPTEL
- Data Science for Engineers by IIT Madras, NPTEL – top 5%
- Data Analytics with Python by IIT Roorke, NPTEL

## Current Research and Projects

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- A semi-intrinsic approach for evaluation of word embeddings, part of IIIT Hyderabad research
- Development of Autonomous Drone system for forest fire detection and spread analysis
- Two-way sign language translation using Computer Vision and Inverse Kinematics
- Visual Speech Detection: Decoding Language from Lip Motions

## INTERESTS

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Machine Learning, Deep Learning, Generative AI, Mathematics, System design, Chess, Books