

## MRIDULA GURUPRASAD NARANG

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### Education

#### MS Ramaiah University of Applied Sciences

B.Tech Computer Science and Engineering

CGPA: 9.2/10

Bangalore, India

Jun 2024

#### Vidya Mandir Ind. PU College

PCMB

95% in 12th / IInd year PUC from Karnataka State Board

Bangalore, India

2018 – 2020

#### Sindhi High School

94% in class 10 from the Central Board of Secondary

Education (CBSE)

Bangalore, India

2005-2018

### Experience

#### Genspark

Bangalore, India

#### .NET Full Stack Developer Intern

Sept 2024 – Present

- Mastered the core concepts of the .NET Framework, gaining a solid foundation in its applications for building robust web applications.
- Developed a three-layer architecture using dependency injection to create scalable and maintainable applications.
- Built RESTful APIs following the three-layer architecture, integrating with MySQL database using Entity Framework.
- Conducted API testing using Swagger, ensuring functionality and performance meet specified requirements.
- Implemented unit testing for projects to validate code quality and enhance reliability.

### Skills & Interests

**Programming Languages and Frameworks:** Python, C#, NodeJS, Flutter, .NET

**Web development:** HTML5, CSS, Bootstrap, ExpressJS, REST API

**Database Management:** MySQL, MongoDB, Firebase, SQL Server Management Studio (SSMS)

**Data Analysis and Machine Learning:** PowerBI, Pandas, NumPy, Regression Models, Neural Networks, Computer Vision

### Personal Projects

#### Mobile application for yoga monitoring and correction

MediaPipe | Django | Flutter | Firebase | Dynamic Time Wrapping (DTW)

- Developed a posture monitoring system using a Mediapipe and DTW, comparing user poses with mentor-specified angles to provide real-time feedback on asana correctness.
- If the posture or angle of the user's asana is incorrect, the model identifies the specific part of the asana that is incorrect and offers guidance on how to correct it.
- This system facilitates users to engage in online yoga sessions with comprehensive guidance, offering a cost-effective alternative to traditional instruction.

#### Swara and Raga Analysis in Carnatic Music

Django | Librosa | Python

- Designed a Carnatic music raga identification system using digital signal processing techniques and customized algorithms.
- Implemented algorithms for swara extraction and raga identification using frequency analysis, clustering, and matching techniques.

- Achieved accurate identification of swaras and ragas in Carnatic music recordings, demonstrating the potential for improved music analysis tools.

## **Hospital Management System**

HTML 5 | CSS | Bootstrap | MongoDB | NodeJS | REST API

- Created a user-friendly web application facilitating seamless scheduling of appointments with doctors across multiple hospital branches, offering services like appointment booking, lab services, and X-ray/radiology services.
- Integrated essential features for booking, cancellation, and feedback submission, enhancing overall user experience and optimizing healthcare processes to optimize customer satisfaction and convenience.

## **Research and publications**

**Taylor and Francis**

**08/23**

### **Design Thinking: A modern approach**

Authored a chapter on integrating Design Thinking with AI/ML to optimize problem-solving and innovation in the AIML domain.

**IEEE**

**04/24**

### **A Blockchain-Based Approach to Counterfeit Prevention**

Published a paper on using Blockchain technology to develop a counterfeit prevention system, enhancing product credibility and protecting manufacturers from financial and reputational damage.

**IEEE**

**05/24**

### **Zen Mentor: A Yoga Monitoring and Correction Application**

Developed a mobile app integrating MediaPipe for detailed yoga posture analysis, enhancing practice accuracy and safety by monitoring the full sequence of movements, promoting accessible and effective yoga sessions.

**Taylor and Francis**

**06/24**

### **Comprehensive Survey on Artificial Intelligence in Blockchain: A Futuristic Integration**

Authored a chapter on integrating AI, Blockchain, and IoT to mitigate technological drawbacks and enhance system performance, exploring their combined impact on real-time digital services.

**Taylor and Francis**

**06/24**

### **Sangeeta Sarangha: AI Model for Identifying Carnatic Raga**

Submitted a manuscript on developing a raga identification system using digital signal processing and customized algorithms for enhanced music analysis.