Sagar Puppala

+91 9390474839 sagarpuppala123@gmail.com puppala-sagar Puppala-Sagar Portfolio Leetcode

Education

Keshav Memorial Institute of Technology, Hyderabad **2022 - Present**
B.Tech in CSE(AI - ML) *9.47 CGPA*

Narayana Junior College, Hyderabad **2020 - 2022**
Maths Physics Chemistry (MPC) *98.5 %*

Experience

Defence Research Development Laboratory - DRDO **Jun 2024 – Jan 2024**
HPC Software Engineering Intern *Hyderabad, Telangana*

- Optimized **GPU processing time by 25.93% for CFD simulations**, significantly reducing missile flow simulation runtime from **30 to 22 days**, accelerating project timelines.
- Designed and refined **parallel computing algorithms** in collaboration with engineers, achieving higher **GPU core utilization** and enhanced execution efficiency for fluid dynamics simulations.
- Performed **comprehensive performance profiling, debugging, and kernel optimization** using advanced tools like **gprof**, ensuring efficient execution and stability for **Reynold's Equations**.

Technical Skills

Programming Languages: Java, C/C++, Python, JavaScript,
Web Development: HTML, CSS, Node.js, React.js, Express.js, Flask, Bootstrap, Tailwind
Databases & Data Management: MySQL, MongoDB
Tools & Platforms: Git, GitHub, Docker, Postman, Unix/Linux, Google Colab, StarUML
Relevant Coursework: Software Engineering, Deep Learning, Operating Systems, Parallel Programming, DBMS

Projects

SkillForge | *MERN, Groq* **November 2024**

- Developed a MERN-based learning platform powered by **GROQ**, enabling users to explore computer science topics like programming, web development, and machine learning. The app features **quizzes** for self-assessment, a "**Chat with PDF**" tool for doubt clarification, **note-taking** capabilities, **curated content**, and **integrated YouTube video** resources for an interactive learning experience.

Breast Cancer Detection | *MERN, Deep Learning, Unreal* **March 2024**

- Created a comprehensive application to detect breast cancer in ultrasound imagery through AI algorithms.The application will employ models such as Efficient Net for classification and U-Net for segmentation. The application is designed to display the results within a VR environment, offering an immersive and intuitive platform for medical professionals to analyse and interpret diagnostic findings and also great learning experience for medical students

Data Scraping Tool for Osmania University Results | *Python, Flask, HTML, CSS* **Mar 2023 - Sep 2023**

- Developed a **multi-threaded web scraper** for **Osmania University results**, using **Python, BeautifulSoup, and Pandas**, reducing data entry time from **2-3 days to 5-10 minutes** and cutting manual labor by **90%**.
- Received positive feedback from both work personnel and college for the effectiveness of the project.

Virtual Physics Lab | *Python, Flask, JavaScript* **June 2023 - Sep 2023**

- Designed the virtual lab with scalability in mind, allowing for the addition of new experiments and features to meet evolving educationa lrequirements.
- Ensured responsive design and Integrated security features to safeguard user data and transactions.
- Contributed significantly to the institute's educational resources by offering a practical and accessible learning tool.

Awards and Certifications

- Consistently achieved the highest academic standing as the **Branch Topper across all semesters.**
- ***Finalist*** *In HackXcelerate hackathon By* ***Microsoft*** *in CBIT.*
- **Winner** at Code Purple Project Expo organized by **IEEE WIE** in Muffakham Jah College of Engineering.
- **Winner** at Prakalp Project Expo conducted by KMIT
- Received the "**Best First Year Team**" title at the Internal Hackathon, KMIT, during my **first semester**.