



B Sourabhgagan Rao

Bachelor of Technology
Manipal Institute of Technology, Manipal

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EXPERIENCE

- **SDE Intern, Manipal Technologies Limited** May 2024 - July 2024
 - Developed the DOT (Delivery on Time) website for Manipal Technologies Limited . Utilized React for the frontend to ensure a responsive and engaging user interface. Managed backend functionalities using Node.js, providing robust server-side logic and API integration. Implemented Microsoft SQL for efficient data management and storage.

PERSONAL PROJECTS

- **BidWave-Auction Platform**
 - Built BidWave, a **real-time auction platform** using Svelte and TypeScript for the frontend. Engineered the backend with Strapi to ensure seamless content management. Implemented user sessions and enhanced security using **JWT authentication**.
- **Brain Tumor Detection**
 - Developed a brain tumor detection model achieving **88.7% accuracy** and an **F1 score of 0.88** on the test set using Convolutional Neural Networks (CNNs). Incorporated **image augmentation** for data diversity and normalization for improved model performance.
- **Spam Email Detection**
 - Developed an email spam detection model using **logistic regression**, achieving high accuracy on test data. Utilized **TF-IDF vectorization** for text feature extraction and label encoding for categorical data processing. Implemented data preprocessing steps such as text cleaning and normalization to enhance model performance.
- **Fleet Management System**
 - Designed a Fleet Management System to track company vehicles and calculate costs over specific periods.Implemented Svelte for the frontend to create a user-friendly interface and Oracle DB for the backend to ensure robust data management.
- **Parallelizing the Boyer-Moore Algorithm**
 - Parallelized the Boyer-Moore algorithm to significantly enhance time efficiency in pattern matching tasks.Utilized **CUDA for GPU acceleration, MPI for distributed computing, and OpenMP for multi-threading** to distribute the workload across multiple processors. Optimized the algorithm's performance, **reducing execution time by 57%** and improving scalability for large datasets.

SKILLS

Languages/Tech:C,C++,Java,Python,ML/DL

Libraries:Pandas,NumPy,Matplotlib,Scikit-Learn,TensorFlow

Cloud/Database:Relational Database(MySQL)

Web Development: HTML & CSS

Relevant Coursework:Data Structures and Algorithm,Operating Systems,Database Management System,Object Oriented Programming

Data Visualization:Power BI

EDUCATION

- **B.Tech, Manipal Institute of Technology, Manipal** June 2021 - Present CGPA: 8.57
- **12th Grade, Madhava Kripa School, Manipal** February 2020 - May 2021 12th Percentage: 92.6

EXTRA CURRICULAR

Captain - KSCA Cricket Team: Active participation in college and KSCA cricket team