

Manoj Tummala

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About Me

I am a fresher pursuing master's degree in the field of Computer Science at University of Southern California. I consider myself a software developer with experience in full stack and MERN stack development. Currently am exploring system interfaces and human computer interaction fields in the topics of AR/VR. I am also an Open Source enthusiast, like to explore new technologies and ideas to develop applications that help in either making task's simpler or to automate them.

Education

University of Southern California (USC)

MS IN COMPUTER SCIENCE (GENERAL)

CA, USA

Aug. 2023 - Jun. 2025

Sathyabama Institute of Science and Technology (SIST)

B.E IN COMPUTER SCIENCE | CGPA: 9.54/10

Tamil Nadu, India

Jun. 2019 - May. 2023

- Published a research paper on "**LiDAR SENSOR FOR SELF DRIVING CARS**" in **ICCES** and currently developing a system interface using **LiDAR & photogrametry** and use augmented reality to display the result. This method is similar to that of used in autonomous vehicles.

Experience

Zee News(Digital - Product & Tech Dept.), Summer Intern

May. 2022 - Aug. 2022, Noida, India

- Worked as **System Architecture & React JS Developer**
- Developed logic and architecture most of the components to work for a project website made from scratch.
- Developed detailed flowcharts and instructions for user and admin interfaces for the working of components such as notifications and elastic search and related suggestions for the task viewed.
- Developed detailed product documentation for the website to assist in user based testing
- Worked on React JS part of the website to develop a buffer free website that contain maintain heavy traffic of users.
- Worked on jenkins and git pipelines for automation testing and other aspects of tasks automation.

Cognibot, Project Intern

Sep. 2021- Dec. 2021, Chennai, India

- Worked and completed an article (not published) on Air-Foil Noise Reduction in air crafts.
- Used **Random forest regression algorithm** and machine learning models to predict the values based on various factors that affect aircraft movement.

Publication

LIDAR SENSOR FOR SELF DRIVING CARS

ICCES 2023

AUTHOR

Jun 2. 2023

- Published a research paper on application of LiDAR sensor in self-driving cars.
- Depicted methodology of developing a self-driving car prototype using LiDAR sensor unlike typical camera application.
- Obtained real-time data of LiDAR sensor from developed prototype and compared with real-time data from camera to depict the clear advantage of LiDAR over camera.
- Displayed the comparison via visual representation of the surroundings using point clouds.
- Would continue by developing an interactive interface to visualize the data of a self-driving car.

Positions & Responsibilities

Google Developer Student Clubs, Technical Member

Jul. 2020 - Mar. 2023

- I have been the technical member of GDSC SIST for 3 years and have guided many of my juniors as well as my fellow coders to succeed in numerous coding competitions that took place in college and also hackathons out of campus.
- I have guided many of juniors to explore more of the technical field of computer science and to participate in Smart India Hackathon who have succeeded till national level selection.

Selected Projects ---

Air Foil Self-Noise Reduction

I did an article on reducing air-foil noise reduction in air crafts by predicting the values based on various factors that affect the craft movement using random forest regression algorithm.

Clipy

I created an application through which one can copy on one device and paste it on another device, using python, firebase and android. Usually this feature is available on mac but not on other devices, so it can be used as "**Universal Clipboard**".

A* Path Finding Algorithm

Usage of A-Star-Algorithm to find the path by itself through maze/obstacles. Interesting and fun application of algorithms. A heuristic way of learning to find the path in Javascript.

Attendance using Face Recognition:

A simple concept of marking the Attendance as the face detection takes place using OpenCV for face recognition and identification, python tkinter for display of the interface and finally gives the result into a .csv file. Worked with professors and peers and eventually made it into a working model.

Skills ---

Programming Languages C/C++, Python, JS, React, Bash, HTML5, SASS

Tools & Libraries Docker, AWS, Jenkins, Linux Kernel, SQL, PHP, Django, Flutter, REST, Node.js

Languages Hindi, English, Telugu, Japanese