Tushar Bajaj

+91-6280918368 | tusharbajaj10@gmail.com | LinkedIn | Github

SKILLS

- JavaScript, Typescript, ReactJS, NextJS, NodeJS, ExpressJS, MongoDB, Postgres, Prisma, SQL, MySQL
- C++, Linux, Git, Docker, Python, RaspberryPi, Arduino, AWS
- Experienced in Data Structures and Algorithms, with extensive practice on GeeksforGeeks and LeetCode.

EDUCATION

- **BE in Electronics and Communication - 2021-Present** **CGPA -7.58**
  Thapar Institute of Engineering and Technology
- **Class 12th - 2020-2021** **90%**
  St Annes Convent School - Sector 32C Chandigarh
- **Class 10th - 2018-2019** **89.6%**
  Saupins School - Sector 32A Chandigarh

EXPERIENCE

Experiential Learning Centre, Patiala — June 2024 - July 2024

- Led team of six in developing path planning and navigation algorithms, as well as object detection systems for autonomous vehicles. Our work focuses on enhancing the vehicle's ability to navigate complex environments safely and efficiently.
- Extensive research on sensor integration and calibration techniques for enhancing the vehicle's perception capabilities.

PROJECTS

Navigation and Localization for Autonomous Car

Lidar | RasberryPi | ROS2 | Python

- **Integrated data** from multiple sources like lidar, camera, encoded motors using **ROS2**, enhancing system's decision capabilities for static and dynamic environment.
- Developed and tested various algorithms on **Linux system** running on raspberry pi.
- Implementation of object detection using OpenCV and YoloV5.

Travel Website

NextJS | TypeScript | MongoDB | Tailwind | NextAuth

- Enhanced the reach and operational efficiency of a currently running **offline business** by creating a travel website using **TypeScript and Next.js** to create a modern, responsive, and user-friendly platform.
- Integrated **NextAuth.js** for secure and efficient **authentication**, ensuring user data protection and seamless login experience.
- Used MongoDB as the database for storing user data, enhancing data management and retrieval processes.

Radar Speed Measuring System

Python| RasberryPi | CV2 | OPS243 Radar

- Generated a program for speed detection and number plate tracking to prevent over speeding in the campus.
- **OSP243 Radar** which uses doppler effect to get the sped of the moving vehicle, camera which takes the picture of over speeding vehicle and is recognized from its number plate.