Chirag Jain

Email: mrjain350@gmail.com| Mobile: +91-7039808862|102 Marigold Satguru Apartments, Thane- 400603
LinkedIn |Github

EDUCATION

B.Tech., **Electronics and telecommunication,** **2018-2022 Graduate**
K.J. Somaiya College of Engineering, University of Mumbai, India **CGPA: 8.7/10**

WORK EXPERIENCE

eYSIP-2022 Intern, e-Yantra IIT Bombay, *Mumbai, India* **June 2022-August 2022**

- Simulation of ballbot: A dynamically unstable structure balanced on a ball in Coppeliasim, that is both stable and able to traverse freely.
- Design PCB to interface the sensors and actuators with the microcontroller as well as provide the necessary power to the system.
- Interfacing IMU and Encoders with eYFi-Mega(a custom board made by eYantra, based on atmega2560) and using PID to control the stability of ballbot..

LEADERSHIP & PROJECTS

Embedded lead, Team KJSCE Robocon, *KJ Somaiya* **October 2020 -August 2021**

- Organized workshops on embedded systems for college students.
- Managed an INR 2,00,000 yearly budget, procured mainly from independently contacted corporate sponsors
- AIR 22 in ABU Robocon India 2021. Maintained perfect scores in the qualifying stages.

Path Planning of 3-wheel holonomic drive using Bezier curve Tracing Technique. **August 2021**

- Navigation control of a 3-wheeled Omni-drive, in a known environment, through a technique used primarily in computer graphics design, called Bezier Curve.
- Uses a Gyro 6050 for maintaining the orientation of the drive using PID, 2 Baumer Encoders for measuring the relative position and distance covered by the drive, 2 TF03 Lidars for measuring absolute distance, and an STM32F407VG-Discovery board used as the microcontroller.

Fence Following on 3-wheel holonomic drive **March 2020**

- Programmed a 3-wheel holonomic drive to perform the task of wall/ fence following using an AVR2560 board interfaced with ultrasonic distance sensors
- Developed a PID control logic for maintaining the orientation of the drive, using only two ultrasonic sensors whilst simultaneously following a wall/fence.

COMPETITIONS

eYRC 2021-2022 theme BerryMinator(BM) **Aug 2021 - April 2022**

- AIR 5.
- The theme required the simulation of a holonomic AGV with a 3-DOF Robotic Arm in CoppeliaSim, in order to navigate across a markered Greenhouse and pluck berries from plants.
- Worked on Coppeliasim and manipulation of an articulated 6-DOF arm.

ABU Robocon 2020 **January. 2020 – October 2020**

- *AIR 8* and winner of the Best overall design.
- Embedded programmer and responsible for the testing of prototype mechanisms and Passing Robot.
- Worked on AVR2560, Arduino UNO/MEGA, and interfaced sensors like laser, ultrasonic, encoders, IMU, LiDARs, etc.

ABU Robocon 2021 **January 2021 – August 2021**

- *AIR 22*
- Embedded programmer and responsible for the navigation of the Defensive Robot.
- Programmed different microcontrollers viz. AVR2560, Arduino UNO/MEGA, STM32, along with sensors like laser, ultrasonic, encoders, IMU, LiDARs, etc.

SKILLS

Programming Languages: Python, C, Embedded C, C++, MySQL.
Micrcontrollers: 8-bit microcontrollers (Uno, Mega), 32 Bit Microcontrollers (STM32F1 and F4 series
Software: Eagle PCB, MATLAB, Coppeliasim, Cisco Packet Tracer, Arduino, MS Office, XCTU, Photoshop
Languages: English (native), Hindi (native), Gujarati (basic), Marathi (basic)

INTERESTS

- **Sports:** Tennis, badminton, squash, soccer
- **Miscellaneous:** Nonfiction literature (crime, history fiction), painting, music (Kpop, Bollywood, pop)