

TASK 2

I have chosen the Ball Balancing Bot project because it is the fusion of mechanical design, control systems, and sensor integration. In this project we have the challenge of maintaining dynamic stability on a 2-DOF platform, especially without relying on vision systems, which offers us an interesting opportunity to go deeper into advanced control strategies and sensor technologies. This project not only enhances my understanding of real-time system responses but it also pushes the boundaries of traditional robotics by exploring alternative sensing methods and actuator configurations.

Autonomous Navigation

I'm drawn to the autonomous navigation project because it lies at the intersection of several fields I'm deeply interested in: robotics, control systems, embedded programming, and real-world problem-solving. It challenges me to integrate theory from electrical engineering and computer science with practical implementation, which aligns perfectly with my goal of becoming a hands-on engineer.