



TECHHUB SOLUTIONS

...be step ahead in your field

Intermediate Robotics & AI

Hands-on Projects

1. Smart Home Security System – KEYPAD Based Authentication
 - Create a secure home entry system using a keypad and microcontroller.
 - Learn about authentication mechanisms and security protocols.
2. Smart Dustbin Project
 - Design and build an automated dustbin that opens and closes using sensors.
 - Understand sensor integration and waste management solutions.
3. Smart Street Lighting System
 - Develop a street lighting system that responds to environmental conditions.
 - Explore concepts in automation and energy efficiency.
4. Smart Fire Extinguisher BOT
 - Construct a robot capable of detecting and extinguishing small fires.
 - Learn about robotics, fire detection sensors, and safety systems.
5. Breathalyzer Project – Alcohol Detection and Alert System
 - Create an alcohol detection system that can alert in case of high alcohol levels.
 - Study sensor technology and public safety applications.
6. Line Following CAR – Beginner
 - Build a simple robot car that follows a designated path using sensors.
 - Delve into basic robotics, sensor alignment, and motor control.
7. Automatic Hand Sanitizer Dispenser

- Develop a touchless hand sanitizer dispenser.
- Understand the importance of hygiene and the use of IR sensors.

8. Obstacle Avoiding BOT

- Create a robot that can navigate around obstacles autonomously.
- Learn about obstacle detection and avoidance algorithms.

9. Digital Input Based Light Activation Project

- Design a lighting system activated by digital inputs.
- Explore digital electronics and input-output systems.

10. Melody – Tone Generation Project Based on the Alert Level

- Generate different tones based on alert levels in various scenarios.
- Study sound generation and alert systems.

Online Simulation Based Projects

1. Tinker CAD Based Smart 3D Designing Project

- Utilize Tinker CAD to create smart 3D designs.
- Learn the basics of 3D modelling and design thinking.

2. Tinker CAD Based Simulation Projects for Electronics

- Simulate electronic circuits using Tinker CAD.
- Gain a practical understanding of electronic components and their functions.

3. Basics of Electronics Based Wireless Electricity Projects

- Explore wireless electricity concepts through basic electronic projects.
- Understand the principles of wireless energy transfer and its applications.

Course Benefits

- Interactive Learning: Engaging and interactive sessions to make learning fun and effective.
- Real-World Applications: Practical projects that relate to real-world problems and solutions.

- Skill Development: Enhance problem-solving, analytical, and technical skills.
- Mentorship: Access to experienced mentors for guidance and support.

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