

PHASE-5 OUTPUT

The autonomous robotic vehicle successfully follows a line path using IR sensors.

It detects obstacles within 15 cm using the ultrasonic sensor and stops or reroutes accordingly.

Smooth motor control achieved with minimal delay in decision-making.

Tested on a black-and-white line track with simulated obstacles (boxes, hands).

Robot was able to complete a looped path with 90% accuracy in obstacle avoidance.

Stable performance in indoor lighting; minor issues in extreme light (suggesting future use of PID tuning or IR shielding).