Introduction:

This Autonomous Water Garbage Collector project combines technology and sustainability to autonomously collect floating garbage from water.It's like a robot that moves around in the water all by itself, picking up trash floating on the surface. Using simple parts like a computer board, motors, and sensors, this project aims to make our waterways cleaner .

Operation:

Power on the device by connecting the battery.
The device will initialize, and the servo motor will position itself for optimal garbage collection.
Place the Autonomous Water Garbage Collector into the body of water you wish to clean.
The device will use the sonar sensor and IR sensors to detect obstacles and garbage.
Upon detecting garbage, the servo motor will position itself accordingly to collect the garbage.
The DC motors will drive the device forward, allowing it to navigate the water and collect garbage.The collected garbage will be stored on the device until it is manually emptied.Connect the sonar sensor and IR sensors to the Arduino Uno.Power the device using the 12V battery, ensuring all connections are secure and properly insulated.

Safety Precautions:

- Keep hands and other objects clear of moving parts while the device is in operation.
- Do not attempt to modify or tamper with the device while it is powered on.
- Ensure the device is used in suitable water conditions to prevent damage.

Maintenance:

- Regularly inspect the device for any signs of wear or damage.
- Clean the sensors and motors as needed to maintain optimal performance.
- Recharge or replace the battery as necessary to ensure uninterrupted operation.

Conclusion:

the Autonomous Water Garbage Collector offers an efficient solution for cleaning bodies of water. By utilizing its sensors and motors, it navigates autonomously, collecting garbage to help preserve our environment.