

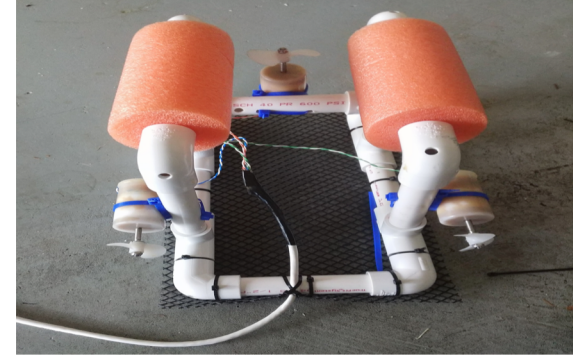
# Underwater Robot for Water Quality Monitoring in Pipelines

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**NEED:** A clear-cut solution for water quality sensing and a mobile mechanism to facilitate the process in real-time. Address the issue of water quality monitoring in water distribution pipelines in cities.

**SOLUTION:** Conduct on-site water quality monitoring by deploying robots that are navigable under water inside pipelines. Equip the robot with sensors to detect the presence of harmful chemicals and toxins.

**PROJECT:** Design of a snake-like robot that will be able to navigate in pipes of about 10-15ft in diameter. The robot will also incorporate two types of cameras – a low-light camera to be used for detecting foreign bodies in the water and a high resolution camera for monitoring and visualizing the state of the robot. The robot will house sample collection and sensing mechanism to detect Arsenic, Lead and Chlorine.



Courtesy: ri.cmu.edu



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