**Project Title:** Embedded Control System for Decentralized Wastewater Treatment

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**Presentation Type:** Poster and Creative Works Showcase

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**Abstract:**
The Decentralized Wastewater Treatment System (DWTS) consists of a variety of water treatment techniques for homes, businesses and industrial facilities independent of power grids or water transport systems. The system can treat both greywater and brackish groundwater- available even in some regions experiencing drought- and therefore can be deployed for single household use, as well as serve disadvantaged communities and remote regions lacking clean water infrastructure. DWTS can do this by being self-sustaining, and mobile, making use of renewable energy sources, solar power in this case, and by being robust, efficient, fault tolerant, and easy to operate. To accomplish this, we propose an embedded control system for DWTS that makes use of embedded sensors and an embedded microcontroller for automation, with the design of the system split into three stages: Data Acquisition, Fault Tolerance, Efficiency Analytics.