

## **Milestone 1**

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For our senior project, we'll be utilizing the agile methodology. Agile methodology is an approach to software development that focuses on iterative development, feedback, and the ability to adapt when needed without destroying large chunks of progress. Agile works best since we often work separately, and when we come together things often need to change. In Agile we use Scrum where the Product Owner is Dr. Ali, and the Scrum master varies month to month so we all get to experience and the development team is composed of Lucas, Jordan, and the Andrews. During our scrum, we plan out sprints and review previous ones. Each sprint is expected to have all members working towards that goal, sometimes that will be together other times it'll be achieved by working separately. Mondays 1 pm-2 pm we will meet with our product owner to report progress, document progress, and evaluate if we need to pivot or continue where we are headed.

Here is the list of our proposed sprints this semester:

- Research and experiment with real-time data visualization techniques and tools & Begin implementing data visualization features in Grafana. - February 1st
- Set up Node-Red on the local server & Gain a deep understanding of the MQTT model for sensor communication. - March 22nd
- Implement remote start/stop functionality for ESP32 devices via Node-Red & develop sensor quality and monitoring features within Node-Red. - April 15th
- Refine and optimize all components of our system via extensive testing and debugging. - May 1st
- Deliver final presentation demonstrating system functionality and capabilities & discuss project outcome, challenges, and lessons learned. - May 8th