

*Group number: May 1715*

*Project title: Internet of Machines*

*Client &/Advisor: Vermeer, Keith Bryant and / Dr. Sang Kim*

*Team Members/Role: Dean VanEvery/Team Leader, Cody Lample/Key  
Concept Holder, James A Kluesner, Matthew Gustin/Webmaster, Sam  
Ellis/Communications Leader, Kojo Otchere-Badu*

o **Weekly Summary**

This week we were able to meet with our new first point of contact with our sponsor, Steven Lischer, who helped us clarify some expectations and refine our scope. We also accomplished work on the transmitter and database sides of the project and were able to begin work on the LoRa modules after receiving the needed hardware. We also were able to create a repository for code that will be used in the final project and began work on the database-side scripts.

o **Past week accomplishments**

- Matt Gustin – Continued writing API
- Dean VanEvery – Began planning for presentation, collected ad/da converters from Vermeer
- Sam Ellis – Replaced the original SQL database with MongoDB and ported old schema
- Kojo Otchere-Badu – Began using C code to sample sensor data using WiringPi GPIO access library.
- Cody Lample - (w/ Kojo) Began writing code to sample sensors
- James Kluesner – Presentation, Tx/Rx still blocked by lack of ArduPi shields, developed secondary testing plan to complement initial testing plan

o **Pending issues**

We found that unfortunately the analog-to-digital converter included in the sensor kits were not functional, and that the LoRa shields were formatted for Arduino microcontrollers,

but luckily our sponsor was able to quickly begin the process of ordering parts to rectify both issues.

o **Individual contributions**

| <b><u>NAME</u></b> | <b><u>Individual Contributions</u></b>                                   | <b><u>Hours this week</u></b> | <b><u>HOURS cumulative</u></b> |
|--------------------|--|-------------------------------|--------------------------------|
| Cody Lample        | worked on C functions for sampling sensors                               | 2                             | 11                             |
| Dean VanEvery      | Began planning for presentation, collected ad/da converters from Vermeer | 2                             | 7                              |
| James Kluesner     | Presentation / Testing Plan  | 3                             | 12                             |
| Matt Gustin        | Continued writing API  | 2                             | 15                             |
| Sam Ellis          | Ported SQL database to MongoDB   | 3                             | 13                             |
| Kojo Otchere-Badu  | Sampling C code via WiringPi   | 3                             | 12                             |

o **Plan for coming week**

Continue working on Transmitter hardware and put all new code onto the gitlab. Integrate LoRa hardware into both raspberry pi microcontrollers and begin testing the connectivity.