

*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*

○ **Weekly Summary**

We were able to receive the hardware required to integrate the arduino-formatted shields with our raspberry pi microcontrollers, and began working to integrate our current codebase with the associated arduino formatting. In the meantime, did some preliminary testing with arduino microcontrollers to verify the integrity of the LoRa modules and begin doing research on accomplishing transmission with them.

○ **Past week accomplishments**

- Matt Gustin – Write basic gateway update route
- Dean VanEvery – (w/ James) downloaded and began working w/ LoRa libraries
- Sam Ellis – Looked into options for securing the database in production to include in the final report.
- Kojo Otchere-Badu – (w/ Cody) Worked on writing C functions for sampling temperature
- Cody Lample - (w/ Kojo) Worked on writing C functions for sampling temperature data.
- James Kluesner –

○ **Pending issues**

It seems that the arduino to pi converters heavily rely on the arduino IDE formatting, meaning that it may be difficult to take full advantage of the pi's compiler/interpreter suite with languages outside of C++, such as python which we were planning on implementing.

We will be looking into working around this in our final implementation to retain the original design.

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	Work on a method to maintain sample/transmission rate even if Pi turns off	3	14
Dean VanEvery	downloaded and began working w/ LoRa libraries	2	9
James Kluesner			12
Matt Gustin	Write basic update route	5	20
Sam Ellis	Tested security options on the old physical database	2	15
Kojo Otchere-Badu	C functions for sampling temperature	3	15

o **Plan for coming week**

Work around the difficulties with the arduino converter modules and continue pushing code to the gitlab.