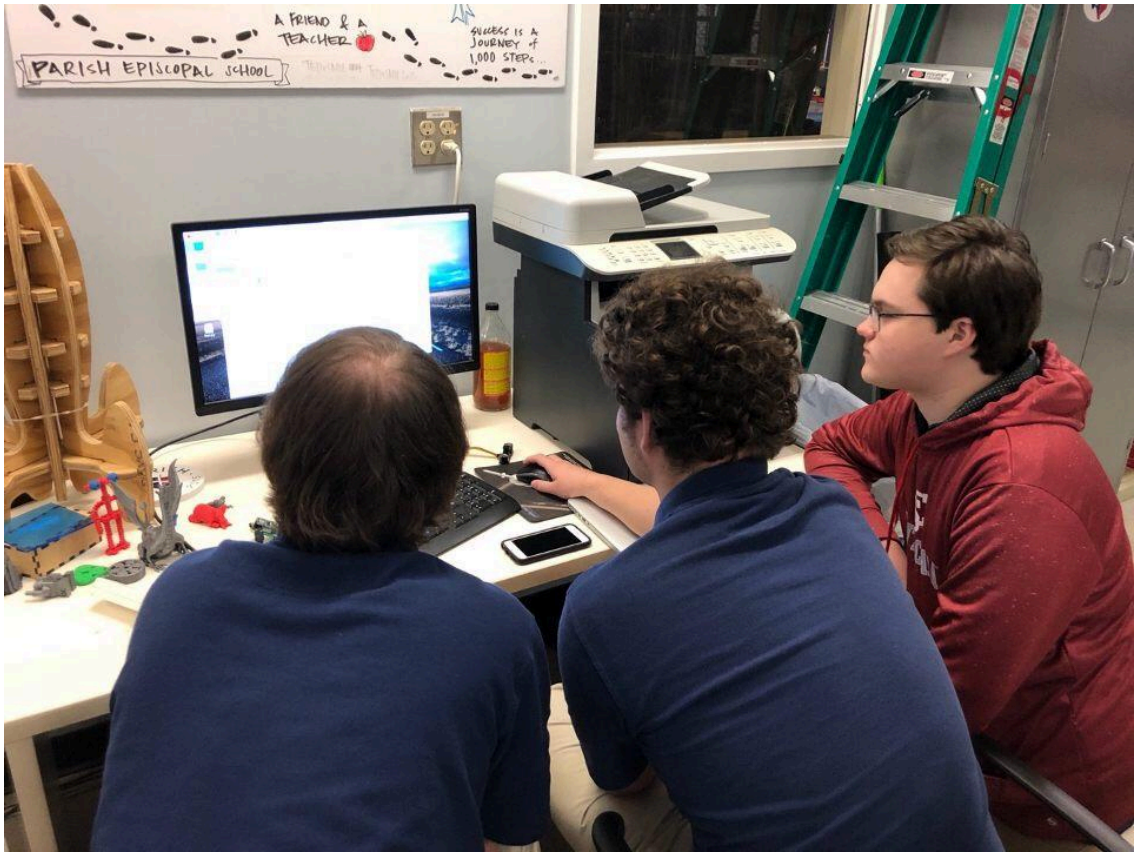
Nathan Liddell
Journal 06 (16th - 18th - 20th)
Due 01/22/18

Journal 06

Tuesday, January 16 - Class
What we did:

- Team update
- Derian continued to study for his license test
- I walked Bailey through what I did with the pi
    - Had trouble finding a way to get the angle measurements into the code of another file
    - The functions that read our sensors and filtered the data were all one function
    - We ended by testing out how well calling the entire function would work

What I learned:
I wasn't sure where to go from where I stopped last Saturday, so it was good to explain what I was doing to Bailey. I had to reread about the function of filters in interpreting the data from our sensors. When Bailey and I ran into a roadblock, we asked bates for his input. He was less familiar with the code than we were, but he agreed with our idea to either call the whole file or define our own functions. We still need to talk with the frame group about mounting the task and telemetry equipment.



Thursday, January 18 - Class + Flex
What we did:

- Derian continued to study for his license test today
- Bates tested programs on the old computer system
- Bailey and I got the telemetry data onto the camera

What I learned:
Today was very exciting because Bailey and I finished the first version of our product. The overlay, while simple and a little ugly, correctly displays the data from our sensors. We fixed our problem from last time by reversing our plan and calling the camera into the berryIMU file. Then, we used the annotate function to have the data appear on the camera window. We ran into a small problem with syntax when converting what was being printed to the shell into a form that the function would accept. When we tested the code, we encountered an error that we looked up. By doing this, I found that the way the data was being put into the annotate function was out of date. We will try to find a code for the pressure and temperature sensors next.

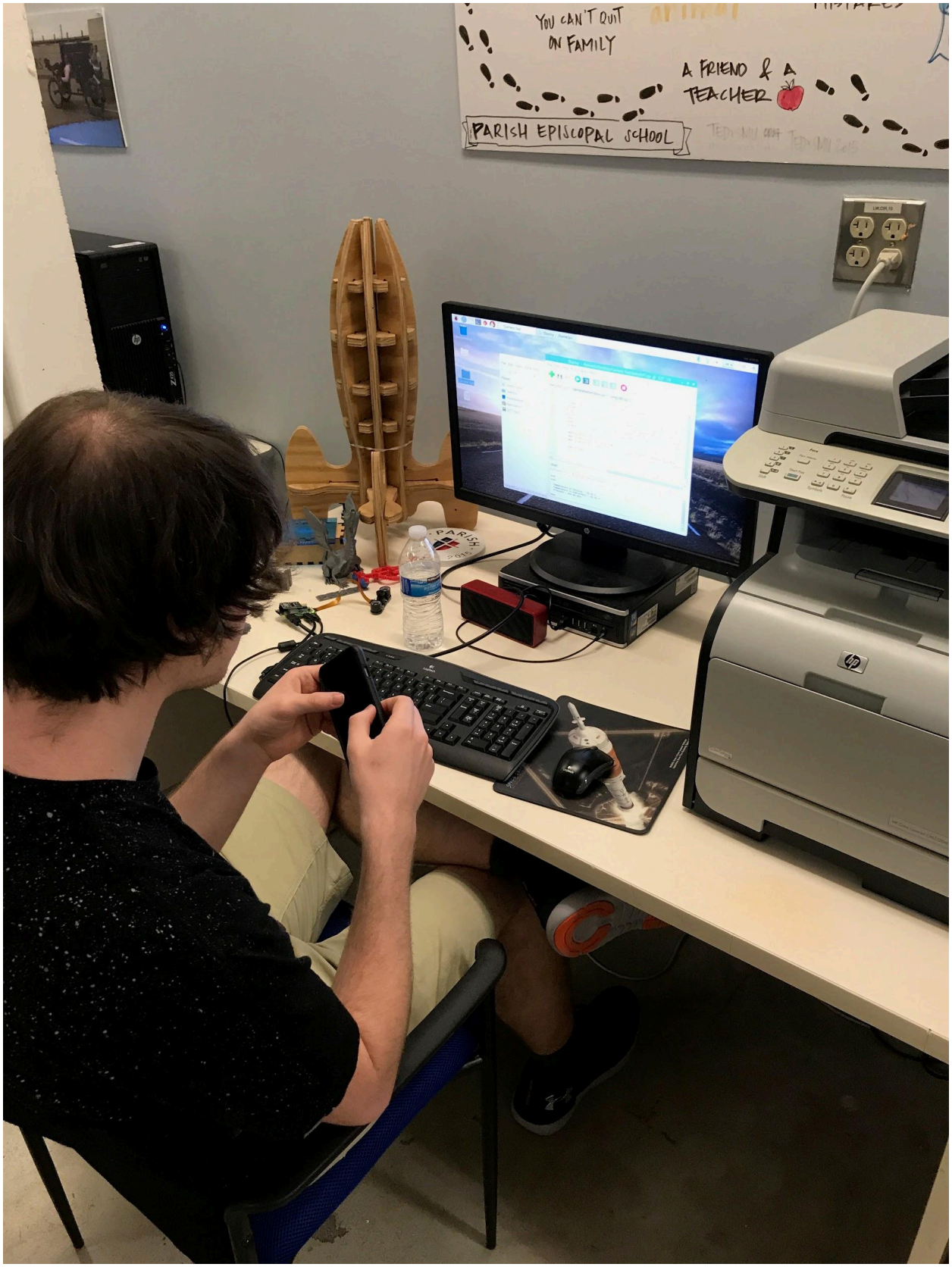
Remembering that the frame team wanted to talk about how we were going to mount our telemetry system, I suggested we talk with Sohum. Our plan for the setup was to put the battery, pi, and camera on the back of a monitor. We have an initial plan to put this between the seats, but this may need to be reviewed in the future. Also, we do not have an arm for the soil and liquid sample tasks.

Saturday, January 20 -
What we did:

- Derian took apart the old transmission system and put together the new one.
- Bates did work on the old computer.
- Bailey and I worked on the raspberry pi
    - I found a code for the pressure and temperature sensors in the github folder we used for the other sensors.
    - Github folder found here: https://github.com/mwilliams03/BerryIMU
    - In testing the code, I found a few syntax errors similar to the previous codes
    - Bailey and I decided define this code as a function because it was fairly small and call it into the main file.

- From there, we decided to explore what the camera dictionary had so that we could create a better graphic for the overlay.
- Then, I looked at what Derian was doing with the transmitters.

What I learned:
We have a basic overlay with all the data we need. The only thing we need to do now is make it more interesting than text on a screen. I think next time we should look at what we still have to do for tasks and make a plan for accomplishing that.


YOU CAN'T QUIT ON FAMILY
A FRIEND & A TEACHER
PARISH EPISCOPAL SCHOOL

133	**Seats**	10/16/17	01/03/18	
134	Materials Research	10/16/17	11/09/17	Katie, Emma, Ma
139	Seat Design	11/28/17	12/15/17	
143	Chat with frame team about seat design and their deadlines	12/06/17	12/06/17	Full Team
144	Fabricate mini seat	12/07/17	12/15/17	Seat Team
153	order material	12/14/17	12/14/17	Seat Team
154	Strength test mini	01/03/18	01/03/18	Seat Team
155	Design Big Seat Mold	01/09/18	01/20/18	Seat Team
156	Show Team First Seat Design	01/09/18	01/09/18	Seat Team
157	put together first foam mold for seat design	01/09/18	01/16/18	Seat Team
158	assess first foam mold for seat design	01/16/18	01/16/18	Seat Team
159	make appropriate edits to first mold	01/18/18	01/18/18	Seat Team
160	Order more foam	01/18/18	01/18/18	Seat Team
161	cut out and glue second mold	01/18/18	01/18/18	Seat Team
162	sand second mold	01/20/18	01/20/18	Seat Team
163	assess second mold	01/20/18	01/20/18	Seat Team
164	Create Seat 1	01/26/18	02/01/18	Seat Team
165	wax and release	01/26/18	01/26/18	Seat Team
166	fiberglass	01/30/18	01/30/18	Seat Team
167	Assess Seat 1	02/01/18	02/01/18	Seat Team
168	**Telemetry**	11/02/17	02/23/18	
169	Task Force Objectives	11/02/17	12/04/17	
170	Solar Cell Task Design	11/02/17	11/07/17	Bates, Bailey, De
171	Solar Cell Task Assembly (Task 3)	11/27/17	12/04/17	Bates, Bailey, De
172	Liquid Retrieval Gear Design 1 (Task 5)	11/27/17	11/27/17	Derian, Nate
173	Liquid Retrieval Gear Assembly 1	11/27/17	11/30/17	Derian, Nate
174	Liquid Retrieval Gear Design 2			
175	Liquid Retrieval Gear Assembly 2			
176	Soil Retrieval Gear Design (Task 1)	11/30/17	12/01/17	Derian, Nate
177	Soil Retrieval Gear Assembly	12/01/17	12/04/17	Derian, Nate
178	Photo Filter Design (Task 2)	11/30/17	11/30/17	Bates, Bailey
179	Photo Filter Assembly	11/30/17	12/03/17	Bates, Bailey
180				
181	Telemetry System One: Analog Sensors and Video (TS1)	12/08/17	02/23/18	Bates, Bailey, De
182	Full Telemetry Explanation to Nate and Bailey	12/08/17	12/08/17	Bates, Bailey, De
183	Talk to Frame People for Telemetry and Task Placement	12/11/17	01/26/18	Bates, Bailey, De