Hi everyone, my name is Jiahao Chen. And they are my teammates, Xinran Zhang, Heming Huang and Siyue Wang. Our team name is Fun with NASA.

After the first presentation, I read all of the comments and feedback you gave us. And I do think that we should have a better project with better use cases. That’s why we decided to change the direction. In our new project, we will analyze open data using our own algorithm to decide if a place is suitable for building solar power plants and output this result to users.

This project aims at the solar power companies that want to build solar power plants and the government that want to plan the distribution of solar power plants.

The reason we do this is because we want to save time and money for solar power companies when they need brief research to decide where to build the solar power plants. Our evaluation algorithm involves several essential elements that will affect the efficiency, cost and safety of a solar power plants. I will give you some examples. The first element is radiation. Radiation basically decides how much power the solar power plants could generate. The second element is terrain. Terrain matters because if you are building your solar power plants in a relatively flat ground, you could basically build you solar power plants right away. If you are not, then you are going to spend time and money to level the ground. The third element is wind speed. Wind speed is essential to the safety of solar power plants. There were accidents that the wind blew away the solar panels from the frame. This could create serious problem. The broken solar panels could hurt people. Also the wires that was originally connected to solar panels are unconnected after the panels have been blew away, and they are exposed in the air. They could create the electric arc which may cause fire.

Besides the big solar companies, the government could also use our application. When it comes to building a solar power plants, the government plays an important rule. Usually they have their plan for the distribution of these power plants that make use of renewable energy sources. They should know where to build solar power plants and where to build wind power plants. Since our application provide the information of radiation and wind speed, it’s very helpful for them.

Here is our Sprint 2 Diagram on Trello. The awkward part is that we spent most of our time in Sprint 2 searching for this new direction instead of working on something more concrete. However, we found our goal and we managed to build up a simple web application. And we are working as hard as we could to make sure that we will be able to catch up.

Our system diagram is shown here. The NREL is one of our main data sources. NREL stands for National Renewable Energy Laboratory. NASA is also an important resource of our project. We will download the data we needed or use the API to save the data in our Database. The way we manage the database is through MySQL. We will then apply our algorithm on these data and evaluate them. Eventually we will show our result in our web application. The web application is built by HTML and JavaScript.

Accomplishment:

1)

Challenges:

1)There are several challenges here. First, we have a large amount of data. They are coming from different sources and they have verities of formats. We need to unify them and make sure only save the usable data in our database. That’s a lot of work.

DEMO:

Now we are going to demonstrate our web application.

Next Sprint Plan:

Here is the trello screenshot of our next sprint plan.