**CSCI 427 Progress Report #: \_\_2\_\_**

**Group Name: \_\_\_\_The SKYentists\_\_\_\_\_\_**

**Dates that this progress report covers:**

January 31, 2020 – March 5, 2020

**What did the team accomplish during this time period? (be specific)**

Continued to code the phase-base implementation plan (Phase 2 and 3):

* Calculated flux tower weights
* Guide user through outlier removal processes
* Run Analytical and Numerical spin ups
* Calculate/Display GPP and RECO ramp functions
* User choosing RECO hyperparameters Pk and Prh
* Remove negative values from optimization processes

The team also submitted an abstract to the UM Conference on Undergraduate Research (UMCUR).

**What did the team plan to accomplish but fail to, and why?**

The team planned to build an intuitive UI but were too hyper-focused on the back-end to make a usable interface. The team also did not have a pilot testing script ready for Dr. Reimer for a scheduled pilot test.

**What particular challenges did the team face?**

* Preprocessing steps with input datasets (fixed by Arthur)
* Seamlessly connecting all of the team’s separate classes and functions
* Scheduling and all meeting at once

**What accomplishments is the team most proud of?**

* Submitting an abstract to UMCUR
* Stitching together code team-mates wrote independently into one unified piece of software.

**What will the team accomplish during the next reporting period?**

The team will complete the rest of the project as outlined in phases 3 4 of our implementation plan, which include:

* Reporting differences in original and optimized GPP and RECO parameters
* Calculating and displaying SOC estimations
* Calculating statistical errors (root-mean square errors) and reporting relevant statistics (means, standard deviations, etc.)

The team will work on the back end and user interface in parallel. Once both are mostly completed, several user testing sessions will take place, using the existing pilot testing script. Then the team will make a poster for UMCUR.

**Any other concerns the team would like to mention?**

* Finding enough scientific users to diversify the user testing pool