

Design Review II

...

Team Skyward

Team Skyward

- Gage Cottrell
- Justin Kincaid
- Chris French
- Alex Sears
- Dr. Dieter Otte - Faculty Mentor
- Dr. Michael Mommert - Sponsor
- Dr. David Trilling - Sponsor

Project Overview

- Creating an online dashboard for the Flagstaff Robotic Survey Telescope (FRoST)
- FRoST researches Near Earth Objects (NEOs)
- NEO research could predict potential disaster



FRoST: 2016

Problem Statement

- FROST users currently have no way to easily view the FROST status and weather information
 - Telescope information: Dome status, current pointing position, current target
 - Weather information: Temperature, humidity, dewpoint, wind speed
 - Clients currently have to use various websites/tools to get needed information

Solution Overview

- FRoST Monitor online dashboard
 - We will build a web interface for our clients
 - All information will be in one place now
- It will save a lot of time, thus enabling our clients to work more efficiently

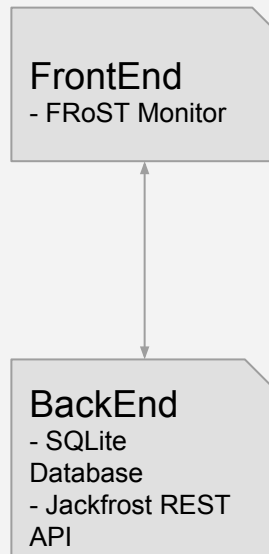
Requirements Overview

- Display of data:
 - Weather
 - Telescope status
 - Sky Camera
 - Charts to display data concisely
- Emergency Shutdown Button
 - Just in case there is sudden bad weather

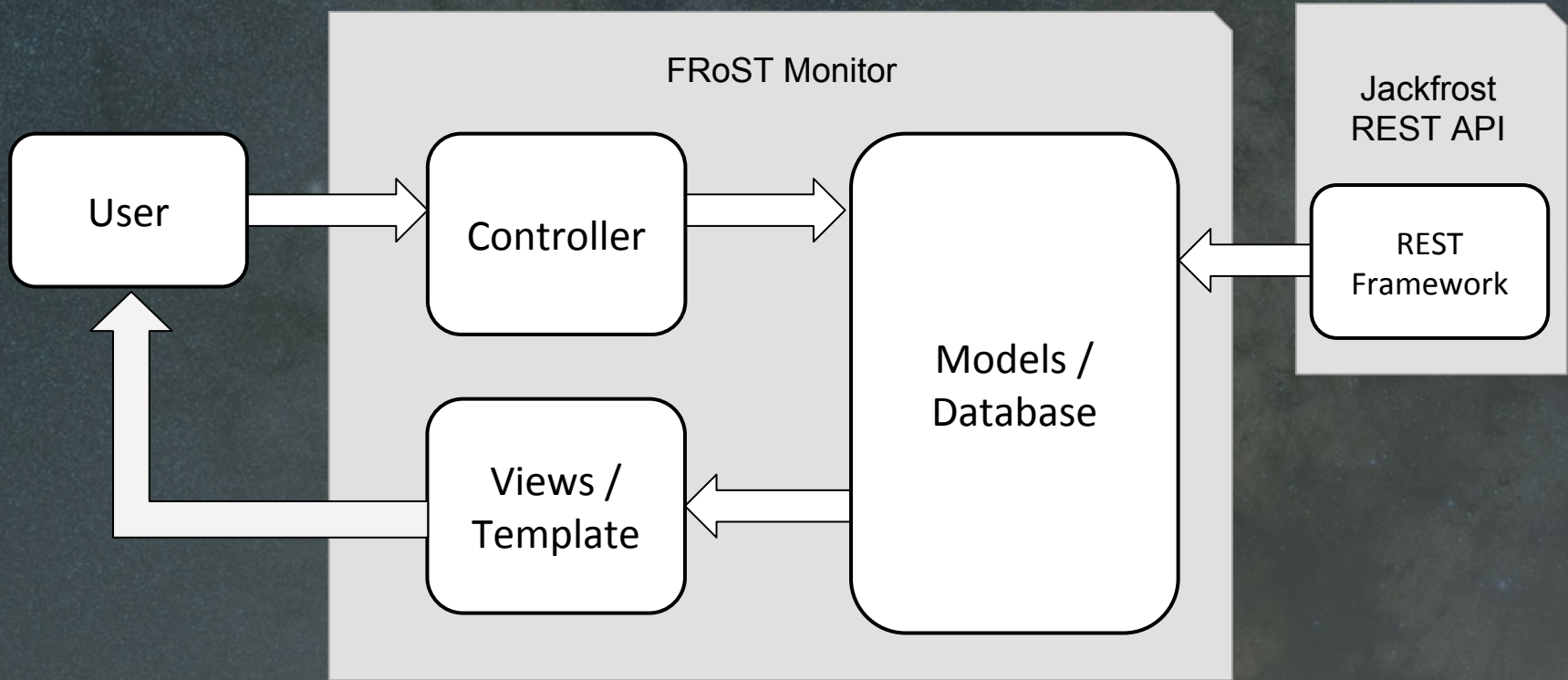
Implementation Overview

- FROST Monitor (Frontend)
 - The web interface that displays all the necessary information
- Jackfrost REST API (Backend)
 - Provides endpoints for updating the FROST Monitor with latest information
- Server
 - NAU Physics Server

Server



Architecture Overview

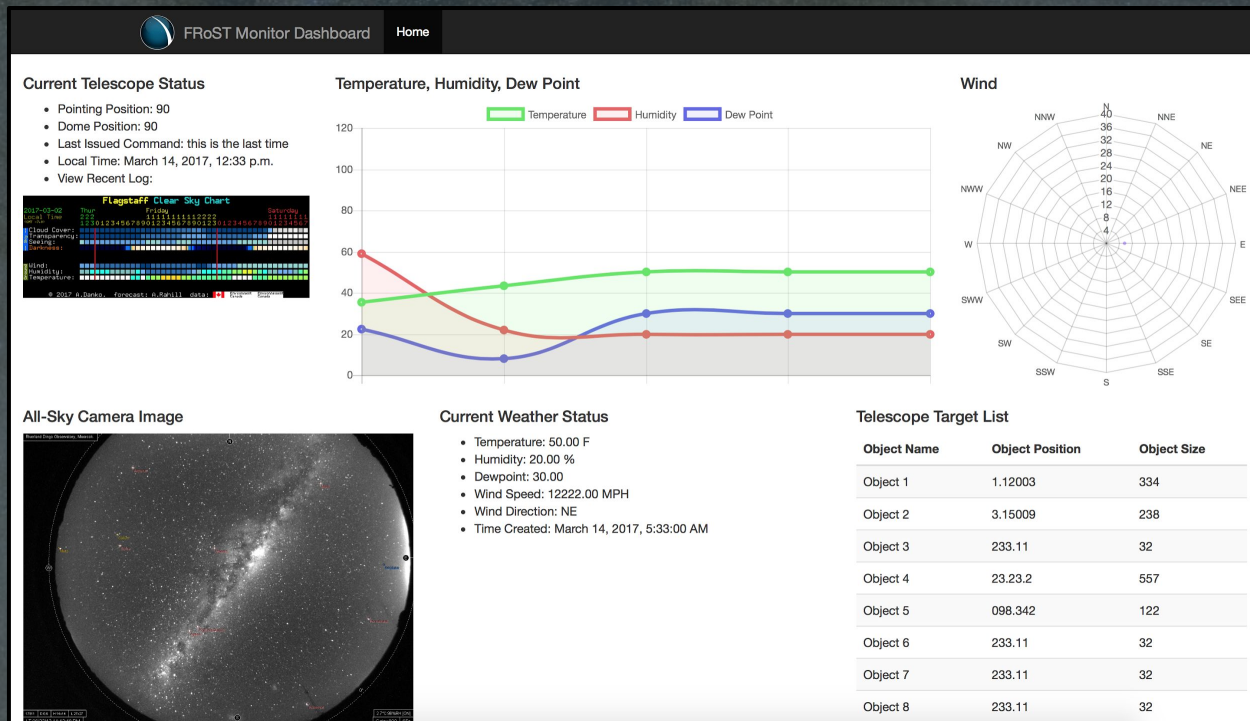


Challenges & Resolutions

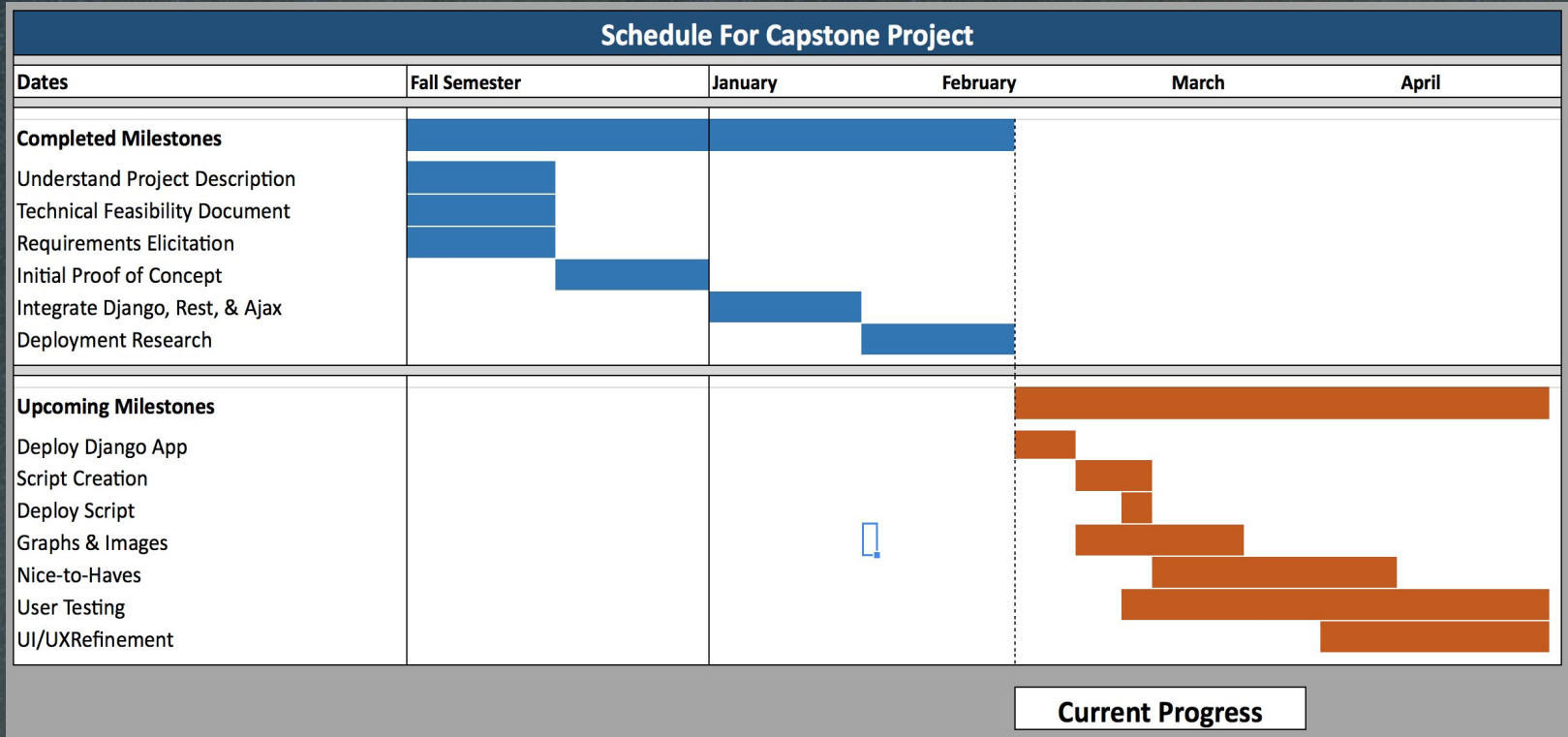
- Django App Deployment
 - Cannot deploy app on client's server.
 - Heroku is deployment alternative.
 - Heroku is a cloud based deployment platform.
 - Downside is heroku could cost money.

Design Challenges

- Page contains all functionality.
- Page not properly formatted.



Schedule



Conclusion

- Flagstaff Robotic Survey
Telescope (FRoST)
- FRoST Monitor
(Telescope info web application)
- On Schedule
- Excited and Hopeful

