
Astronomy:
Dark Sky
Finder

Team Stars

- Better coder
among us
- Super Organized

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Problem Statement

Design a solution to identify the best dark-sky locations nearby for stargazing or astronomical observations, using light pollution data.

Our similar interest in astronomy and stargazing has driven us toward this problem statement as this is one of the major problems we face as Stargazing enthusiasts, so we always wanted a solution, so why not build one?

Stargazing: under the stars, lost in wonder

Stargazing is a mesmerising journey into the vastness of the universe where the night sky becomes a canvas of shimmering lights and endless possibilities. As you look up, the twinkling stars evoke a sense of wonder and curiosity connecting you to the mysteries of Galaxies. Far beyond our reach, it's a moment of serenity. Where time slows down it? The silence of the night is filled with the whispers of the cosmos.

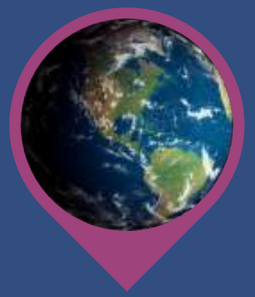
The Solution Overview

Approach

Main problems we face when it comes to stargazing is finding the right place to. Hence, we would like to work on the 3 major factors that affect the experience.

- Light pollution
- Wind speeds
- Air quality

Dark Sky Finder : What can we do?



Location

Showing the users the best places to have a stargazing night. These places are mostly high altitude areas and places with a distant horizon.

Light Pollution index

Assessing the area's stargazing potential using its light pollution index which makes the night sky less visible

Air Quality Index

Assessing the area's air quality index, the better the AQI, the better will be the visibility at night.

How does this address the problem

- The above factors, if assessed correctly, can provide the user the best experience when it comes to stargazing.

How??

- Light Pollution - In areas with higher light pollution, the night sky tends to be less visible.
- Wind Speed - High wind speeds can make the night sky less visible because they cause scattering of particles in the air which dispers or scatter the light from the stars which will make stars less visible.
- Air Quality - the particles in the polluted air scatter and absorb the light from distant stars, making them too faint to see with the naked eye

Our Plan Of ACTION

FOR SUCH A COMPLEX APPLICATION, WE NEED A LOT OF TECHNOLOGIES, TOOLS, FRAMEWORKS AND PROGRAMMING LANGAUGES TO INCORPORATE REAL-TIME ELEMENTS WITH EACH OTHER

Languages

Tools

Frameworks

And many more

Implementation Plan

Finding a Problem statement

Finding the best problem statement out of the given statements. Find Out which one is closer to our interests and skills

Assesing resources

Assessing the resourses to findout out what we need for the project and what we have in our hands

planning resource utilization

Plan usage of each resource in each domain, Usage of each tool, framework and language in different scenarios

experimentation

Using the planned resources to create demo pieces of our planned project

trial and error method

Turning the entire project into chunks which we can treat separately using trial and error method

Final Application

Creating a user optimized programme which serves the main purpose!!

Expected Outcome

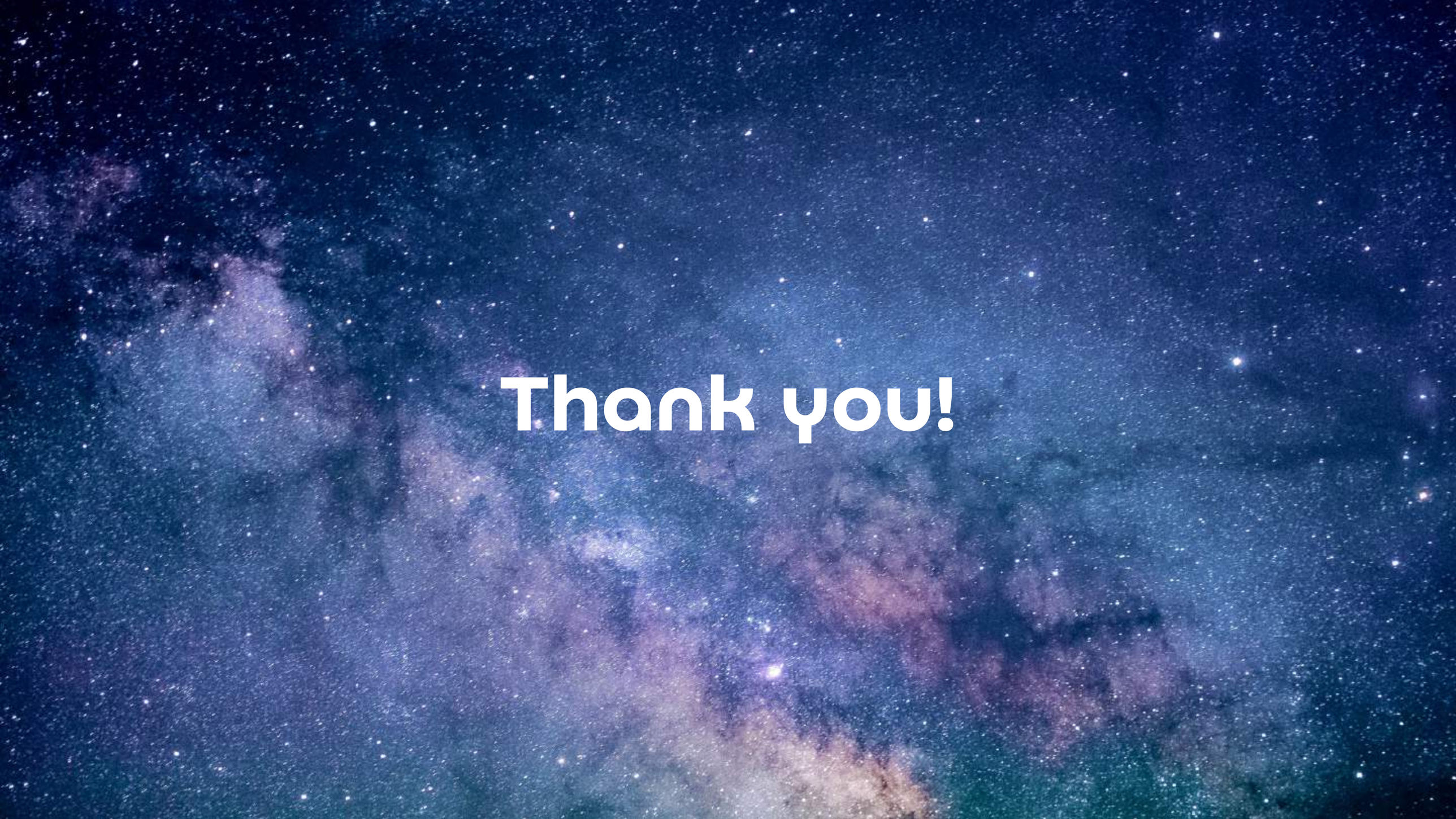
- If everything goes well in our plan, we will be able to assess the best location for stargazing.

How?

- matching each parameter to the most favorable conditions for the best result.
- and if the parameters match, we will be displaying a positive message and vice versa

The Main benefit of this is that the end user will be able to find the best places to go stargazing using our map with integrated weather parameter monitor.

This is going to help everyone in research, and will also help people with curiousity to learn!


Thank you!