112 TP Competitive Analysis

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Stellarium

<http://www.stellarium.org/>

Features:

Stellarium features the ability to show constellation lines between stars, and I plan to include these in my app as well.

Date/time control, and the ability to start/stop time as necessary is another feature that I will add.

In addition, the ability to zoom in and out is a feature I will add.

Anti-features:

Stellarium includes a lot of stars, and I plan to only include some of the brighter/more popular stars and constellations.

Stellarium is built for planetariums to use, and I’m going to make my app more computer-friendly, so anybody with Python 2.7 can use it at home.

It’s also rather image-heavy – it contains pictures for all the constellations as well as nebulae and a few other things. I’m going to keep my app much simpler than that.

PyStarAtlas

<https://code.google.com/p/pystaratlas/>

Features:

PyStarAtlas is actually a library that comes with a couple command-line programs that create star maps similar to what I am working towards. It has far more many stars than I will need, though I may end up using one of the catalogs it uses to collect data about more stars.

It pulls from a catalog that I will probably also use, the Bright Stars Catalog from CDS.

It draws constellation lines, which I will also do.

Anti-features:

PyStarAtlas does a lot of the calculations itself, and I actually use PyEphem to do many important astronomy-related calculations for me.

PyStarAtlas, again, pulls from far too many sources, and is actually quite slow to run. I plan to make my app less resource-intensive.

It doesn’t actually run correctly! My project will actually have at least something running without error by the due date. :)

Planetarium

<http://neave.com/planetarium/>

Features:

Planetarium displays constellation lines and has a toggle option. It also has the ability to change time and start/stop time at will, and the ability to scroll around, all of which I will use in my app.

It also has the ability to mouse over stars and see a whole host of information about them: their name, constellation, magnitude, distance, right ascension, and declination, all of which I will include in my app as well (though I’m going to change “mouse over” to “click on”).

Anti-features:

It uses the mouse to navigate, whereas I’m going to use the arrow keys, as I find that much more straightforward and far less confusing. I just find navigation to be rather confusing on this app – I personally believe that simpler is better, and the arrow keys simplify things far more than mouse—based navigation can.

GoSkyWatch Planetarium

<http://www.gosoftworks.com/GoSkyWatch/GoSkyWatch.html>

Features:

GoSkyWatch displays constellations based on lines drawn between stars. It also features information about planets and stars, both of which I will include. It also features time-lapse animation, which I am implementing in my planetarium.

Anti-features:

Once again, navigation within GoSkyWatch is confusing: it’s a phone app that purportedly displays the night sky at the direction that you’re currently pointing your phone in. However, it doesn’t always work, and when I’ve talked to people about using it they claim it’s rather buggy and really confusing. I plan to simplify navigation using the arrow keys to make it easy for viewers to see the sky over Pittsburgh – at any angle that they want to.

StellarDraw

<https://2015.spaceappschallenge.org/project/stellardraw---sky-is-the-limit/>

Features:

In StellarDraw, you can design and create your own constellation from the stars in their actual positions in the sky. This app is basically an extended version of what I want my app’s “draw mode” to be. You think of your own constellation, draw lines between existing stars, and voila! Your very own constellation.

Anti-features:

I dislike StellarDraw’s click-and-drag model of drawing. Instead, I am opting to use the click-only model: you click between two stars to create a line between them. Additionally, StellarDraw has one large thing missing: any information about the stars you’re drawing between whatsoever. I’m going to keep the information portion of my app live during the draw section, so you can at least see the names of the stars you’re creating a constellation out of.