SolarSize - Vlog #4 Script

Team member (re)introductions

Tristan Brown-Hannibal
- Data representation
- Server/web management
- Back-End Design

Karlee Fidek
- Documentation
- GitHub/Wiki Management
- Front-End Design
- Meeting Minutes

Kaden Goski
- Data Processing/Management
- Back-End Design
- Vlog Editor

Brief project blurb

We will be working with a local company, Greenwave Innovations, to develop a tool that utilizes building energy consumption metrics and solar intensity data to calculate accurate ROIs on solar power generation. This tool will allow customers to see how different photovoltaic (PV) systems match up to their requirements, so they can make informed decisions. This tool could also utilize this data, once installed, to ensure that the solar power generation is meeting standards, and if not, alert the customer of an issue such as snow blockages, cracks, etc. There could also be an extension into other Greenwave business domains, such as power storage sizing for cloudy days and the night time.

Business Need/Opportunity

The problem is that there is not a good way to quickly size the needs of a customer, with respect to their individual circumstances. Two organizations may use the same amount of power, but the PV solution may be completely different. This is because of aspects like the solar intensity of a location, or the physical makeup of an organization's space, where they would install these solar generators. Being able to profile, and give accurate information about a solar solution, would help customers make better choices, and maximize their ROI.

Project activity dates

December 6, 2021 - February 1, 2022

Project activity

December 6, 2021 - February 1, 2022

We participated in Project Bazaar Day #1. We met with Greenwave Innovations for guidance, feedback, and to get additional consumption data from their customer. We finished MVP 2 and will complete vlog #4.

Tristan Brown-Hannibal
- Added map selection
- Added overlay of consumption using a .CSV file
- Switched from ApexCharts.js to highcharts.js
- Began progress on summary page
- Added UX to loading experience

Karlee Fidek
- Add new inputs for billing and solar installation
- Add tooltips for inputs
- Change date input to use date picker
- Gantt chart
- Trello Board
- Meeting minutes

Kaden Goski
- Added variables and tweaked solar estimation model
- Explored system losses and the effect of dust and snow

Group
- Met with Greenwave Innovations
- Met with Dr. Yow
- Received consumption data from Greenwave Innovations
- Project Bazaar #1
- Completed MVP 2

Status description

Project Status - Green (on track)

We completed our MVP 2 and we feel like we are on track with our estimated project timeline in our Gantt chart.
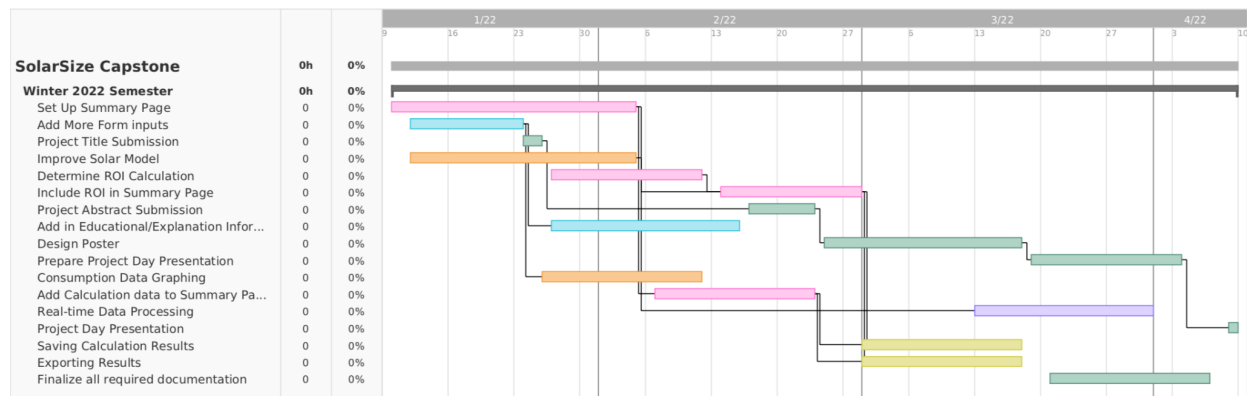
Project issues

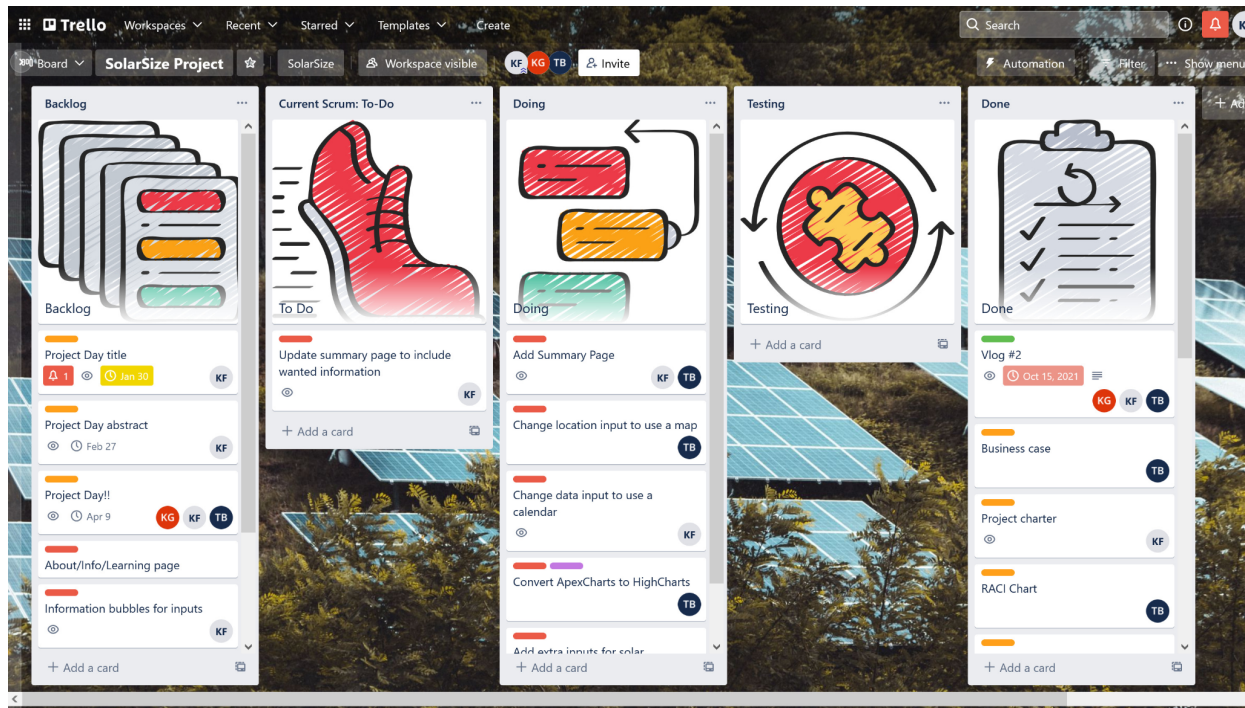- Lack of ROI and billing knowledge

Project changes

- No project changes
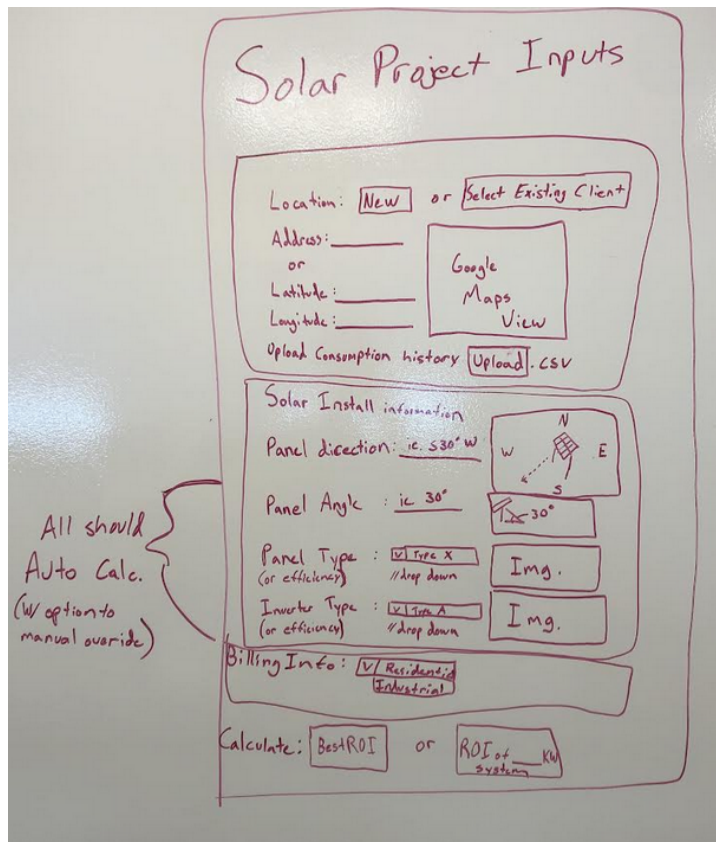
Documentation overview and/or project demo

Gantt Chart:

Trello Board:

Greenwave Lo-Fi Prototype:

Demo:
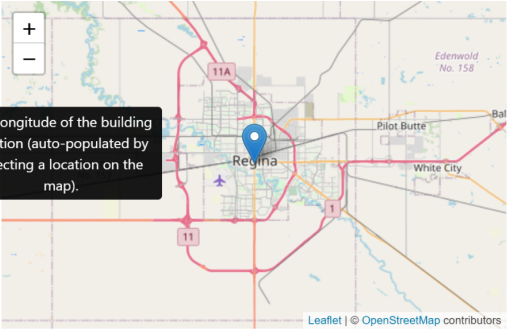
Next up

Overview of next several weeks: project day documentation, summary page updates/additions, work on saving location-based data

Tristan Brown-Hannibal
- Investigate SaskPower API for billing information
- Begin working on ROI calculations
- Implement additional inputs as needed for ROI calculations
- Add some error tolerance/feedback to form submit
- Add address support to map

Karlee Fidek
- Input form validation
- Look into calculations or results to display on summary page
- Explanation/educational information
- Look at saving location specific data
- UI improvements
- Documentation
- Meeting minutes

Kaden Goski
- Implement physical sizing calculations
- Implement inverter inputs
- Automatic determination of angles and direction based on buildings

Group
- Meet with Greenwave Innovations
- Meet with Dr. Yow
- Get ROI and billing information from Greenwave Innovations
- Complete project day requirements

Team reflection

Discuss:

- Does the team feel "on track"? (reiterate the above colour status)
  - Green Status
  - We feel like we are on track. We finished MVP 2

- What progress does the team particularly feel good (great) about?
  - Map input for location inputs (latitude and longitude)
  - Accepting .csv file input and graphing included consumption data

- What barriers (if any) does the team feel are a current impediment to success?
  - None at this time

- What help (if any) does the team require to move positively forward?
  - Greenwave Innovations' input on billing calculations and ROIs

- What questions or concerns does the team have (if any)?
  - No questions or concerns at this time