

SolarSize - Vlog #5 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. 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

February 1, 2022 - March 8, 2022

Project activity

February 1, 2022 - March 8, 2022

We participated in Project Bazaar Day #2. We met with Greenwave Innovations for guidance and feedback. We finished MVP 4 and will complete vlog #5.

Tristan Brown-Hannibal

- Refactored code, separating large components into smaller ones
- Fixed bugs
- Looked into cookies for storing user locations

Karlee Fidek

- Annual generation bar chart
- ROI and annual cash flow calculations
- About page - ROI and annual cash flow calculations
- Trello Board
- Meeting minutes

Kaden Goski

- Help and FAQ documentation
- Testing documents
- Panel/Roof direction UI

Group

- Met with Greenwave Innovations
- Project Bazaar #2
- Completed MVP 3, 4
- Worked on MVP 5
- Project Day Abstract

Status description

Project Status - Green (on track)

We completed our MVP 4 and we feel like we are on track with our estimated project timeline in our Gantt chart.

Project issues

- No issues at this time

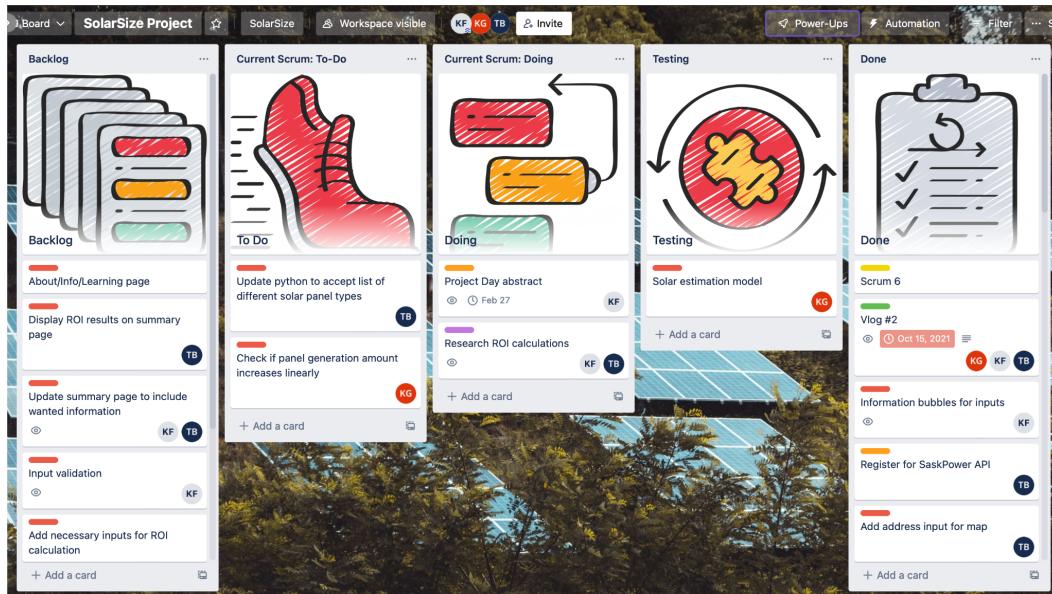
Project changes

- We had a focus change to Focus on determining optimal solutions rather than custom solution analysis

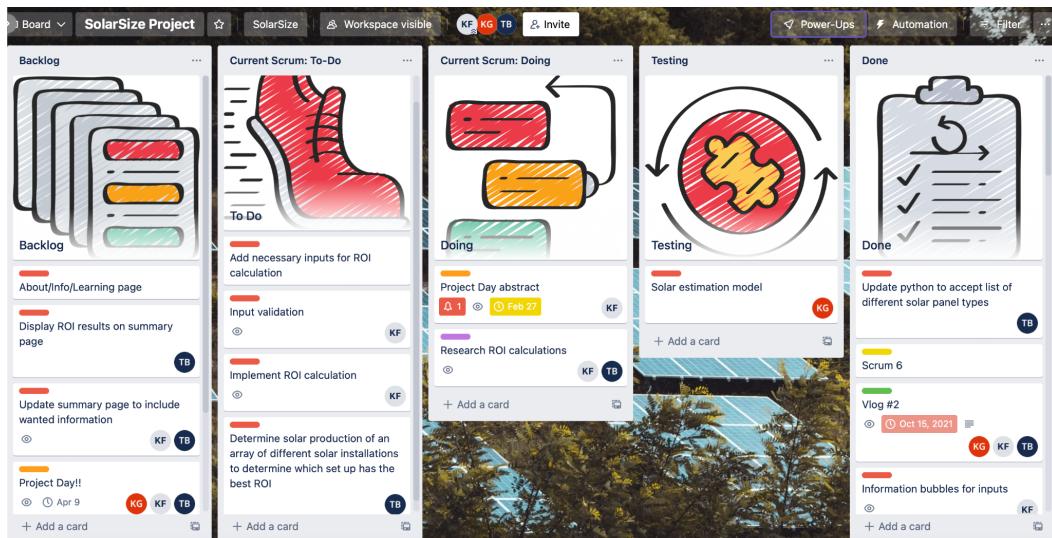
Documentation overview and/or project demo

Trello Board:

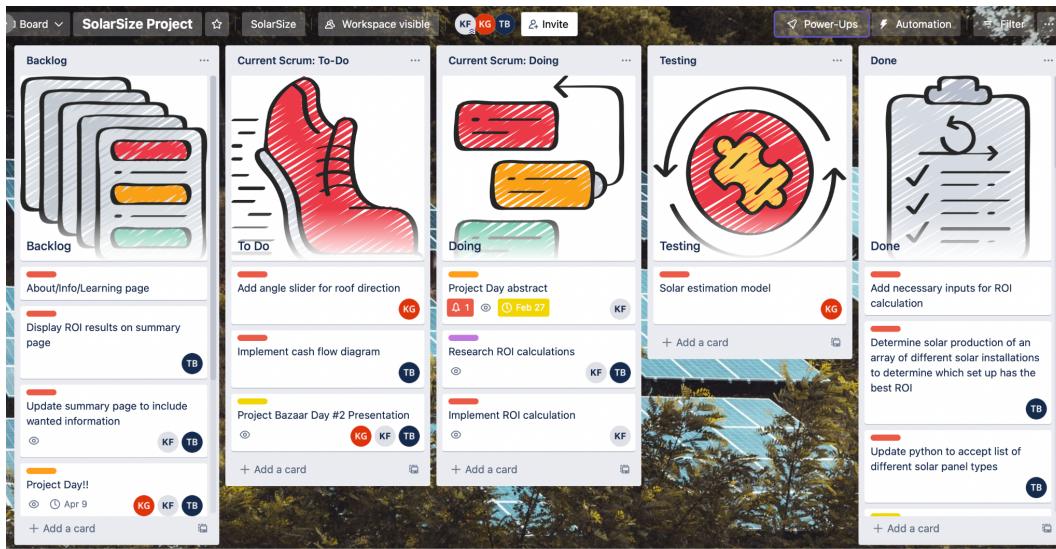
Feb. 8 - 15



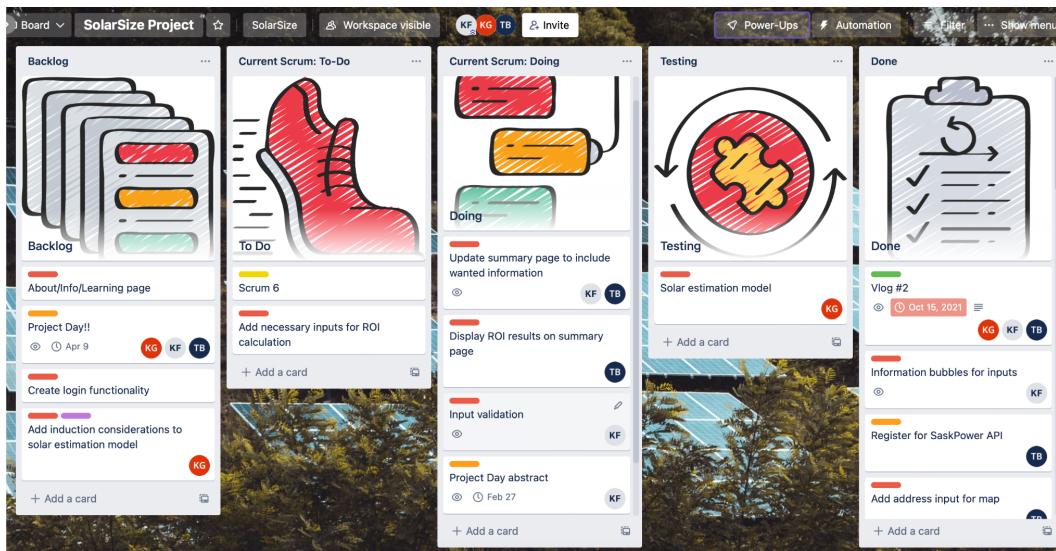
Feb 18 - 21



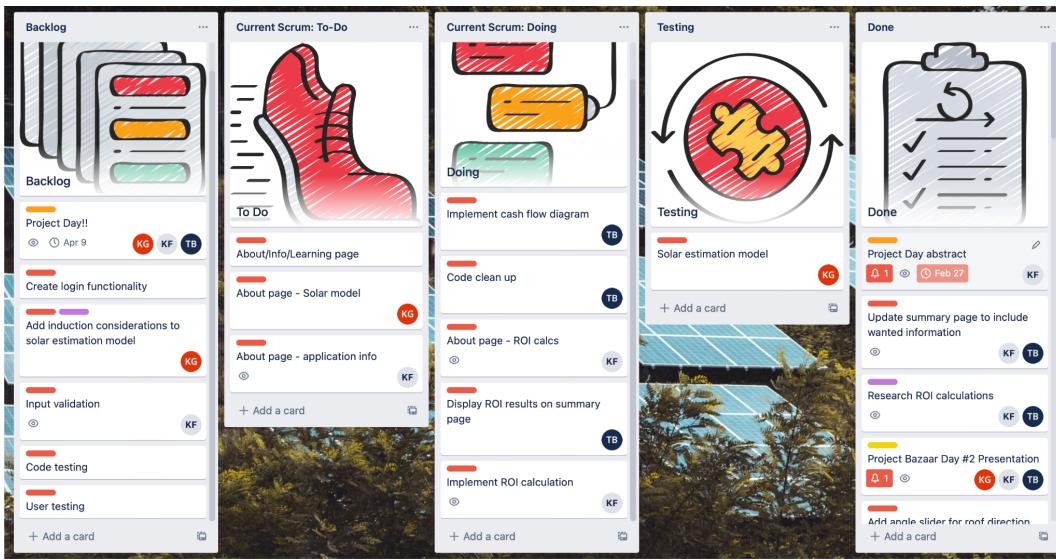
Feb. 21 - 24



Feb. 24 - Mar. 1



Mar. 1 - 8



ROI and Annual Cash Flow Calculations:

Balance Remaining (end of 1st year) = Capital Cost + Loan Interest - Amount Saved

Balance Remaining (2nd year and on) = Balance Remaining + Loan Interest - Amount Saved

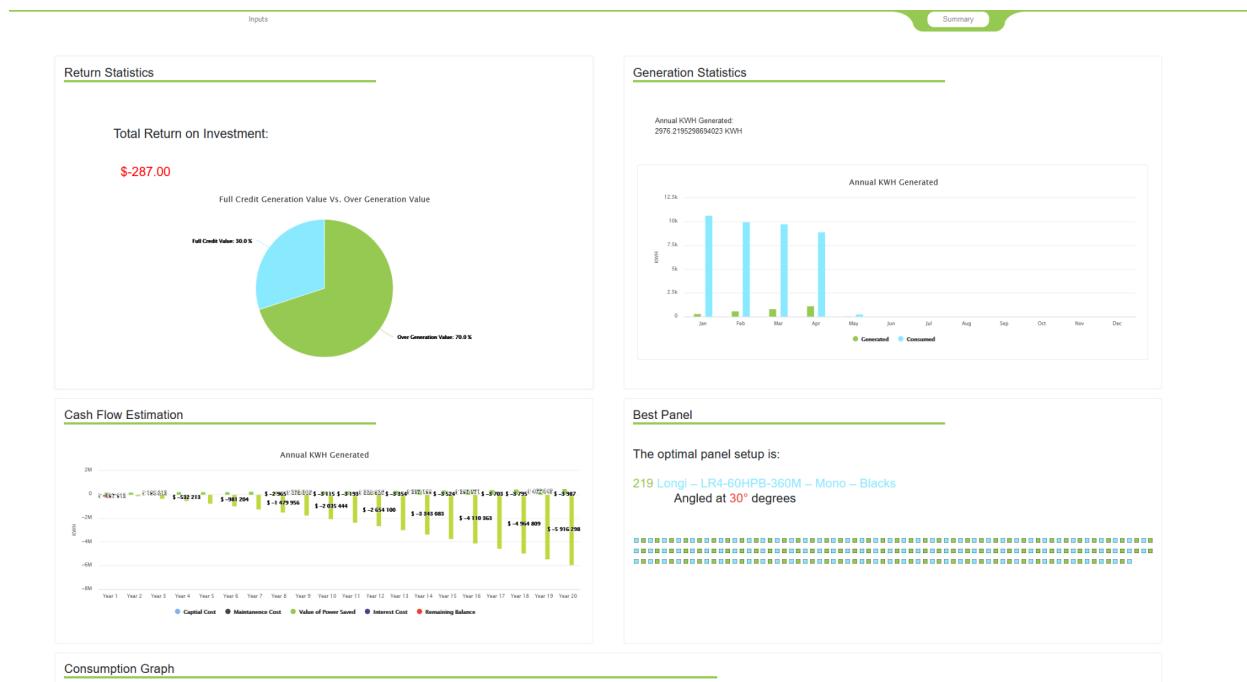
*Capital Cost = (System KW × Cost/KW Installed) + Interconnection Study Fee
+ Bidirectional Meter - Grants/Rebates*

Amount Saved = (Power Produced × Price of Power) - Maintenance Costs

$$ROI \% = \frac{\text{Total Savings}}{\text{Total Cost}} \times 100$$

$$\text{Years Until Paid Back} = \frac{1}{ROI \% / 100}$$

Demo:



Next up

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

Tristan Brown-Hannibal

- Continue with bug fixes
- Add cookies to location drop down
- Begin code quality report
- Get timezone from Lat/Long

Karlee Fidek

- ROI and annual cash flow calculation fixes
- About page - ROI calculations and general project information
- User testing
- Begin poster design
- Trello Board
- Documentation
- Meeting minutes

Kaden Goski

- Documentation
- More User and Unit testing

- More bug Fixes

Group

- Meet with Greenwave Innovations
- Meet with Dr. Yow
- Complete MVP 5 and work on MVP 6
- Complete project day requirements

Team reflection

Discuss:

- Does the team feel "on track"? (reiterate the above colour status)
 - Green Status
 - Yes, we feel like we are "on track"
 - Done MVP #4
- What progress does the team particularly feel good (great) about?
 - ROI, annual cash flow, and optimal installation analysis
- What barriers (if any) does the team feel are a current impediment to success?
 - No barriers at this time
- What help (if any) does the team require to move positively forward?
 - No help required at this time
- What questions or concerns does the team have (if any)?
 - No questions or concerns at this time