Creating a Web App for Tracking ESG Performance on Farms

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Introduction & Background

Halderman
- Farm management company
- Created designation for eco-friendly farms called Eco Elite
- Goal is to encourage sustainable practices leading to long-term viability of the farm and operations enhanced as a result

Companies with strong ESG (environmental, sustainable, governance) performance typically achieve better stock performance, demonstrating how sustainable practices reflect positively on financials and customers.1 Eco Elite takes an ESG approach to protecting resources on the farm and surrounding areas, people engaged in managing and operating the farm, and the governance of the farm management.

Web App: Tools & Resources Used

Merge directives
Create corresponding questions
Design web application to track and record responses
Assemble scoring mechanism
Test and receive feedback from farm managers
Implement feedback and develop application to be feature-complete

Conclusion and Final Deliverables

- Deliverable 1: Sustainability standards and scoring system for Eco Elite Status.
- Created by merging Eco Elite and Leading Harvest standards and collaboration with mentors.
- Received industry feedback from Beck’s Hybrids, local farms, and Halderman Area Managers.
- Deliverable 2: Web Application and Dynamic Form
  - Capable of adapting as standards change in the future
  - Dynamic question design that allows for questions to be updated by modifying the contents of a JSON file.
  - Detailed guidance of each questions with relevant resources, rubrics, and additional details.
  - User Authentication, log in and sign up, and a management page implemented.

Directives and Scoring: Development Process

- Examining and Merging ESG Standards
- Gathering Feedback from Industry and Faculty
- Iterating and Revising Constantly

Final App and Directives Deliverables

- Merge Eco Elite and Leading Harvest into a single cohesive set of standards
- Develop a user-friendly webapp to help farms determine if they meet Eco Elite status
- Create an easier process for small farms to adapt sustainable practices and certify themselves as such

Our team organized two teams during the design phase to implement our objectives:

- Master List Team
  - Went through each directive in Eco Elite and Leading Harvest
  - Created a list of questions that needed to be included on the form
- Styling Team
  -Styled both the Halderman form and the guidance page for the web application
  - Created features asked by Halderman so the form looks visually appealing

Next Steps

- Connecting to public/external databases for further verification.
- Exploring potential integration after the app infrastructure is built.
- Optimizing offline use by exploring integration with tools that would allow for offline saving of data or form progress to upload later.
- Auto filling form components and verification of the indicated practices.
- Further security for User Authentication.

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