EE/CprE/SE 492 GROUP PROGRESS REPORT

Group number: **sdmay22-19**
Project title: **Underground Cable Packing Web Tool**
Client: **Professor Mathew Wymore, EPRC, Alliant Energy**
Advisor: **Professor Mathew Wymore**
Team Members: **Name - Leadership Position (below)**
Alexander Young - DevOps and System Engineer
Brevin Wapp - Scrum Master
Haadi Majeed - Quality Assurance Engineer
Matthew Hoskins - Team Lead
Nate Tucker - Tech. Lead
Tom Sun - User Experience and Requirements
Quinten Sorice - Client Point of Contact

o **Project Summary:**

This project's goal is to develop a web tool/site that will function similar to the executable software the project is based on while adding new features and improved primary functionality such as: enhanced algorithm, mobile support, and ease of use. This web tool will also allow for more readily available functionality being an application available on EPRC's website for immediate use while being hosted on Iowa State University's servers. To this, the direction or scope of this project has not undergone any change from original ideation and planning.

o **Accomplishments**

The team as a whole has continued weekly meetings with individual meetings between collaborating members (i.e. those working on the communication together, those working on the algorithm together, etc.) have other meetings focused on work rather than administrative and whole project infrastructure/technical issues. The team has continued software development progress on the team gitlab issue boards.
Individual work: (Team member - Description/list of work, when/week)

- Alexander Young - Working closely with ETG in order to have the server start hosting the project over the internet (week 10). Made some basic communication improvements on the existing backend side code (week 8). Worked out some database schema changes (week 7).
- Brevin Wapp - Aided both the frontend and the backend teams with a variety of tasks. One of which being the research and development of UI that could work well with being used on Mobile devices (week 8). Database schema and general setup (week 7). The frontend to backend connection for the login page of the UI along with the aiding in the development UI of login (week 10).
- Haadi Majeed - Worked closely with Matthew in the rework/refactor of the existing algorithm code to ensure optimal functionality, readability, and speed (week 7-8). Wrote additional algorithm and algorithmic math tests that were testing specifically for potential

edge cases or errors (week 8). Starting research on ways to make the site secure at the point of login as well as the data input phase (week 10).

- Matthew Hoskins - Rework and refractor of algorithm to improve speed and prevent potential errors to occur in program operation, (week 7-8). Expand further on tests related to backend operations of mathematical calculations and final outputs created by the algorithm verified correctness with math and graphs - detected and fixed potential problems with backend operation, (week 7-9). Work on getting proper results sent and subsequently graphed on the frontend with frontend dev Nate tucker (week 10 - current week).
- Nate Tucker - Reworked the frontend side of communication for more proper receiving of the backend's data algorithm results (week 8). Developed the frontend rendering process in conjunction with setup UI page for the input and receiving points (week 7-10).
- Tom Sun - Improved the visual aspects and functional user interface of existing frontend web pages (week 7). Started development of non-base functionality pages for the frontend with interconnected processes to create a suitable user experience (week 8, 10).
- Quinten Sorice - Coordinated with Alliant to schedule a demo of the current iteration of the application, which should have the basic functionality of adding cables and getting results drawn.Verifying testing suite of algorithm (weeks 7-current). Working with the algorithm team (Haadi, Matt, me) and Nate to transfer algorithm results from the backend to the frontend (week 10).

o **Pending issues**

At this time there are not any pending issues for any aspect of the project, and the team is just progressing with the expected development work.

o **Advisor Input/Signature:**

Please select one of the options below and sign.

___X___ I am pleased with the progress the team is making.

_____ The team's progress could use some minor improvements which I will discuss with them.

_____ The team's progress has some major concerns that I will discuss directly with Dr. Bigelow (bigelow@iastate.edu , 515-294-4177)

Signature:

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