Development of Web-based Engineering Software

Flowserve

Overview
Over the years Flowserve has accumulated a large amount of pump graphs on paper. Their wish is to overtime digitize these paper graphs using a software solution that will allow them to transition into a digital database. The software is a human-aided way of retrieving the graph data from the scanned sheets.

Objectives
Build a software solution that will allow Flowserve to input the required data easily from a scanned graph and store that data in a database for later retrieval.

Approach
- We visited the Flowserve site to get a description of the project in detail along with first-hand experience with reading the hand-drawn graphs.
- We planned out the software use-case and a basic workflow the user would encounter.
- We assigned sections of the program to various members of our team.
- We constructed weekly progress reports for Flowserve to keep them up-to-date on our status.
- We had a weekly conference call with Flowserve as well.
- We spent time before diving into the project researching various open-source solutions for pieces of our program we could utilize.
- Toward the end of the project when we had working database functionality, we sent weekly video demos of the project to Flowserve.

Outcomes
Finally, list the outcomes for this project making sure to clearly convey their implications for the sponsoring company:
- The software is not fully complete per the use-cases we outlined. A future capstone team will be required to finish the project up. This was due to us underestimating the difficulty of some sections of the project.
- Currently, Flowserve can use the program to get the graph data from a curve as a series of ordered points.
This should reduce long-term maintenance costs of the Flowserve pump curve database.