sdmay18-27: Data Analytic Tools for Inconsistency Detection in Large Data Sets

Week 2 Report September 16 - September 22

Team Members

Camden Voigt — Technical Lead Christopher Konopka — Communication Lead Logan Heitz — Team Lead Timothy Rogers — Quality Lead

Summary of Progress this Report

Meet with Kingland to discuss project specifications and questions. Determined that there will be a central database that holds more than 100 million records and each day reports will come in that either add new records or update existing records. We have to check these reports records against the central database to find inconsistencies. Kingland also wants us to test existing industry solutions in addition to developing our proprietary solution in order to get a performance benchmark. We also learned that this project will sit on the backend of an existing UI.

Started version 1 of the project plan and uploaded it to the team website. Version 1 will include the project statement, deliverables, design, project requirements, challenges, and schedule.

Development of initial solution for the project and a block diagram to illustrate the solution we are proposing. See below for the block diagram and in group contributions and project plan for more information on the solution.

Pending Issues

Complete Project plan V1 Complete Website V1 Create file structure of config file Create parser to convert daily reports to SQL table Create system for doing comparisons in the SQL table and flagging inconsistencies Update proposed solution with new design plans Update project schedule with new information

Plans for Upcoming Reporting Period

Finish project plan V1 and Website V1 Meet with advisor to discuss technical approach of the project

Individual Contributions

| Team Member | Contribution | Weekly Hours | Total Hours |
|---------------------|--|--------------|-------------|
| Camden Voigt | Worked on developing block diagram for proposed design and solution. The proposed design will utilize hashing in order to speed up data comparisons and reduce the size of the database tables. A configuration file will be utilized so that settings can be quickly changed to adapt to Kingland's needs and facilitate quick testing of different solutions. | 3 | 5.5 |
| Christopher Konopka | Worked on problem statement and literature review for project plan. | 2 | 3 |
| Logan Heitz | Worked on Project Timeline and Deliverables for project plan. | 3 | 5 |
| Timothy Rogers | Worked on Validation and Acceptance Test and Challenges for project plan. Updated website for version 1. | 2.5 | 4.5 |

