DORIS × The Data Mine

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Introduction
DORIS has worked with client organizations since 2012 researching their people and workspaces. This research has resulted in over 4000+ hours of usability studies and 5000+ interviews.1

Our team streamlined DORIS’ workflow by:
- building a customized master database
- analyzing the database for historic trends
- creating a dashboard illustrating key findings from client data
- enhancing visualizations from real use cases

Database Objectives
- Develop schema for database organization
- Use schema to build database from existing data
- Query database and compose how-to manual

Data Visualization Objectives
- Critique DORIS deliverables
- Iterate on visualizations from real use cases
- Produce dashboard illustrating key findings from client data

Research Methodologies
Database
- Opted to use DBDiagram to generate expression tree
- Utilized Python and SQL to build database

Data Visualization
- Worked with GGPlot, Tableau, Infogram, and Beautiful.ai to design relevant plots
- Used Shiny in R to create interactive dashboard with data from master database

Data Overview

Database Overview

Expression tree/entity-relation diagram which was used for the creation of a standardized schema that was applied to the database code.

To operate the database, users will enter SQL queries through command line. SQL will then interact with the master database and return results.

Data Cleaning

Database Connection

SQLite3 SQL database engine

User

Data Visualization Overview

Real Use Cases

- Created new visualizations for real DORIS clients in order to analyze overall trends.
- Iterated on past DORIS deliverables to build a standard data visualization platform/template.

Average Number of Employees

Activity by Workstation

Top Left: Workweek employee attendance pattern for tax auditing firm
Top Right: College data highlighting virtual-in-person distribution
Bottom: Identifying trends in workspace activity for tax auditing firm.

Dashboard
- Queried data from the SQL database and created dashboard with graphics in key areas of interest.

References

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