Team Graphiq Content
Project: Graphiq Reality

Team Members

- Vincent Duong (Team Lead)   vncntduong@gmail.com
- Kevin Mai   (Scribe)   kevinmai993@yahoo.com
- Vincent Tan   vwtan@umail.ucsb.edu
- Xinglun Xu   xinglunxu@gmail.com
- Jiapei Yao   charlesyjp@gmail.com

Project Description

Our Vision

Our team will develop a web-app that integrates with Virtual Technology to allow easy interactive visualization of data sets and relations.

Problem

Data is difficult to understand. Even with 2D visualizations, graphs, and plots, it can still be hard to grasp relationships and derive anything meaningful from big data sets. Virtual reality provides new opportunities to gain deeper insight into the magnitude of data, allowing us to see through a relatable perspective.

Importance
- Allows for easier understanding of large amount of data
- Easily visualize and analyze big data.
- Find patterns/relations inside data sets.
- Make analyzing data more entertaining.

Today's Solutions
2-D and some 3-D visualizations are readily available on the web, however large scale, dynamic, and interactive data visualization is not widely available.

Outcome
Build a web application that allows users to select various datasets and explore them in a multi-dimensional virtual reality interface.

Project Milestones
1. Set up web app's framework
    a. Basic web app for 3D data visualizations
2. Allow for various sources for data
    a. Set up our own database
    b. Integration with Graphiq
    c. Integration with Google Public Data
    d. User-inputted data
3. Implement VR tech to app
    a. Interfaces: VR movement, keyboard movement, voice recognition,

Solution

Implementation and Technologies
Hardware:
Google Cardboard / Oculus Rift / Samsung Gear/Leap Motion
Software:
Web Application: Rails (Ruby) / Django (Python) / Node (JS)
Data: Either Graphiq API or Database like MySQL or Postgres
Hosting: AWS / Heroku
VR Technologies: WebVR, Three.js, possibly d3.js

Process Model
- Use Agile and Extreme Programming methodologies.
- Daily scrum meetings
- Weekly GitHub contributions
- 2-week Sprints organized using Trello
    - 3 Milestones/10 Sprints through the course of 5 months.