Tutorial Presentation Plan

CSE-6339 Data Science and Computational Journalism

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I. Google Fusion Tables

1. **Introduction to Fusion Tables** – An experimental application from Google Research
2. **Filter and summarize** across hundreds of thousands of rows – Examples
3. **Find public data** - Google Tables helps us search thousands of public Fusion Tables, or millions of public tables from around the web you can import to Fusion Tables. Build on public data sets - Some data owners have selected to make their data public. Search for and look at these data sets or call them via the Fusion Tables API.
4. **Import your own data** - Upload data tables from spreadsheets or CSV files, even KML. Developers can use the Fusion Tables API to insert, update, delete and query data programmatically. You can export your data as CSV or KML too.
5. **Visualize it instantly** - See the data on a map or as a chart immediately. Filter for more selective visualizations. Turn location tables into maps
   Points, lines, polygons, customer addresses, place names, countries and more can be mapped in minutes with Fusion Tables. Columns with location data are automatically interpreted.
6. **Create a chart**, map, network graph, or custom layout and embed or share it
7. **Publish your visualization on other web properties** - Now that you've got that nice map or chart of your data, you can embed it in a web page or blog post. Or send a link by email or IM. It will always display the latest data values from your table and helps you communicate your story more easily.
8. **Merge your data with other people's data** - Tables of data owned by different people can be merged virtually in Fusion Tables to see all information in one place.
9. All data is automatically saved and stored in Google drive
10. **Merge two or three tables** to generate a single visualization that includes both sets of data
11. **Host data online** – Make data available always, let users access the latest data always, provide an API to developers to access data.

Reference: https://support.google.com/fusiontables/answer/2571232?hl=en

II. Mapbox Studio

1. Design and publish beautiful maps using Mapbox Studio
2. Mapbox Studio uses a language called CartoCSS to determine the look of a map
   a. Explain a few of interesting elements in CartoCSS, e.g. Line, marker, etc.
3. Take a basic map and update it by adding buildings, roads and parks by writing to CartoCSS
4. Also, make the map interactive by adding tooltip to the POI(Points of Interest) layer

5. Demonstrate how a new project is created and uploaded to mapboxstudio site.
6. Developer-API
    a. Show simple examples of how to embed map in webpages using the Mapbox.js JavaScript library

III. CartoDB

1. Introduction to CartoDB - make awesome maps and build powerful geospatial applications
2. Dashboard, datasets, maps
3. How to import datasets (Excel, CSV, XML, SHP, GeoJSON etc.)
    a. Upload a local file or import directly from a public URL
    b. Sync using Google Drive
    c. Sync using Dropbox
    d. Import directly from Twitter
    e. Create an empty dataset
4. Data Library
5. How to connect datasets to map
6. Share map – public, private
7. Data view – inspect, filter and query data and see results in spreadsheet format
8. CartoDB.js – JavaScript library to interact with the CartoDB service
    a. Connect to your stored visualizations
    b. Create new visualizations
    c. Access or query raw data from a web browser
    d. Show examples of important APIs in CartoDB.js
9. SQL API
    a. SQL API allows us to interact with your tables and data inside CartoDB as if we were running SQL statements against a normal database.
    b. We can do select, insert, update and delete on data

Reference: https://github.com/CartoDB/cartodb