



Travel Itinerary

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Problem

- ❖ Time spent on travel planning.
- ❖ The number of websites they need to browse to plan a trip.

Audience

- ❖ People who love to travel.
- ❖ Opportunity for people involved in the fields of Data Visualization, Data Analytics, Machine Learning.
- ❖ One stop solution to make their travel planning easier.

Approach

- ❖ Develop a custom visualization in D3.js that uses New York City AirBnB data from Kaggle.com
- ❖ Evaluating D3.js as an EDSL for developing custom visualization.
- ❖ Demo of the application.

Why D3.js ?

- ❖ D3's transformations make dynamic visualizations easier to implement. By adopting immediate evaluation of operators and the browser's native representation, D3 improves compatibility and debugging.

Evaluations

Comparing D3 with Protovis and HighCharts

Visualization Libraries	Lines of Code	End-User Effort	Implementation Effort	Debugging Ease
D3	45	Medium	2 days	Very Easy
HighCharts	61	Medium	3 days	Medium
Protovis	50	Medium	2 days	Hard

Table 2: Expressiveness of the visualization libraries

Evaluations

Windows

- JS libraries required to download : NodeJS, ExpressJS, Lodash
- Time taken to set up the environment for the project to run : 10 minutes

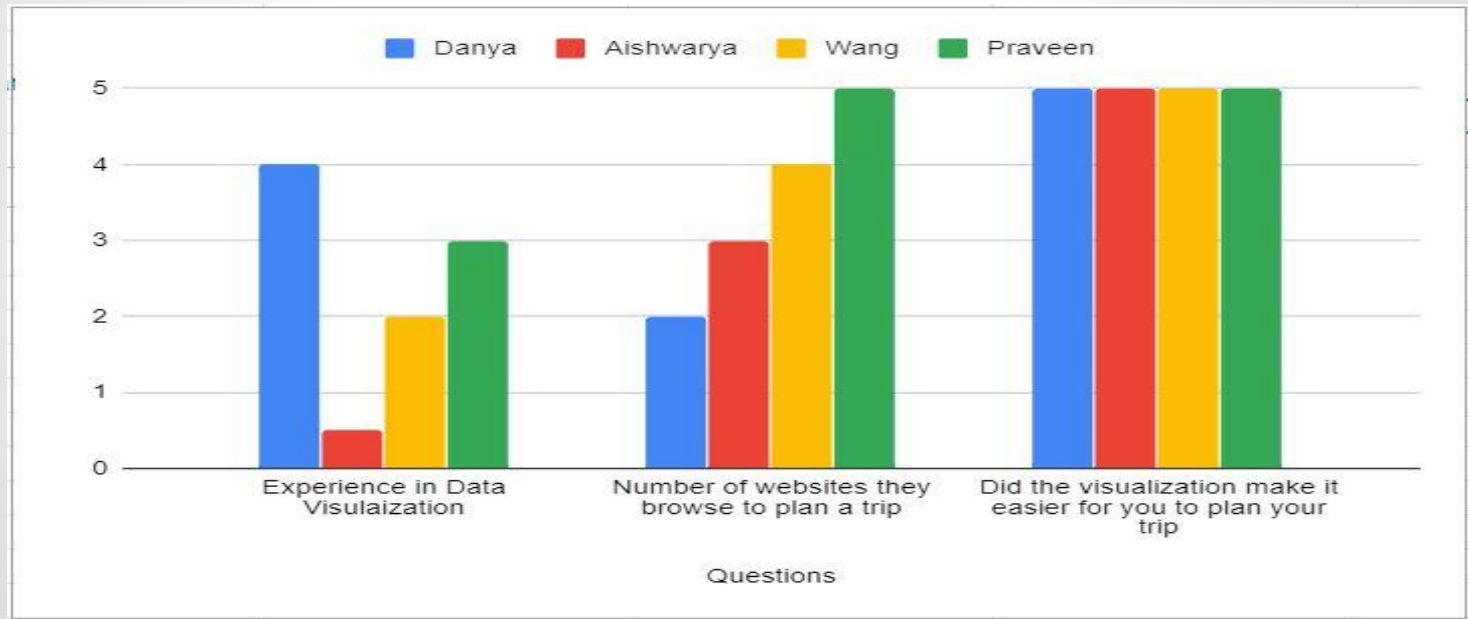
MacOS

- JS libraries required to download : NodeJS, ExpressJS, Lodash
- Time taken to set up the environment for the project to run : 5 minutes



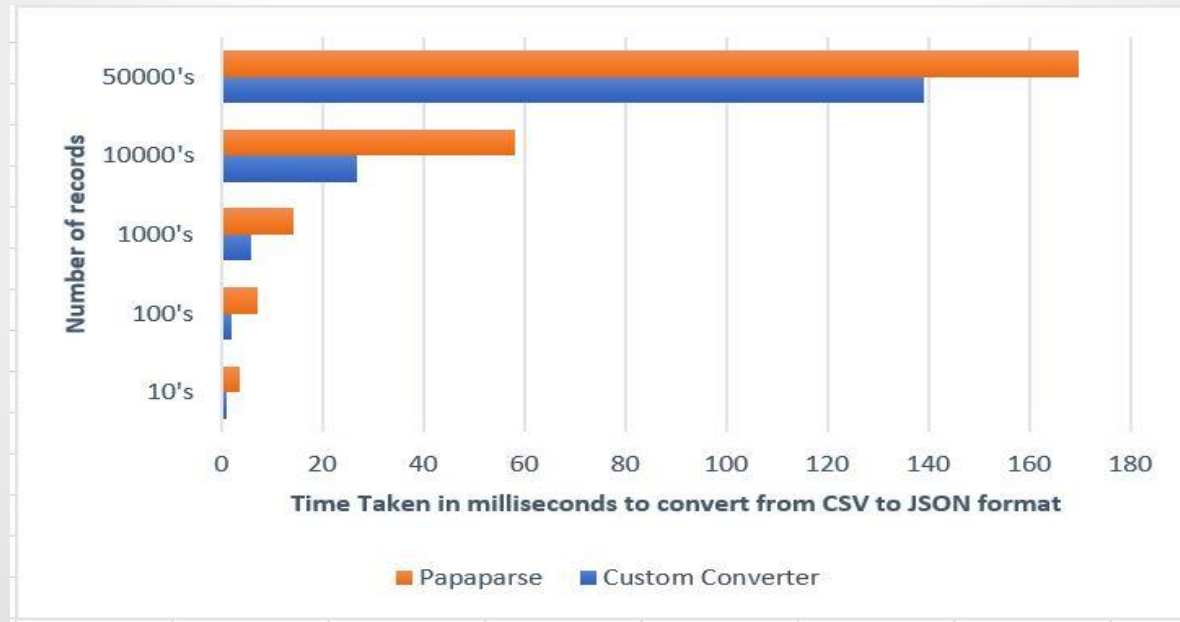
Evaluations

Empirical



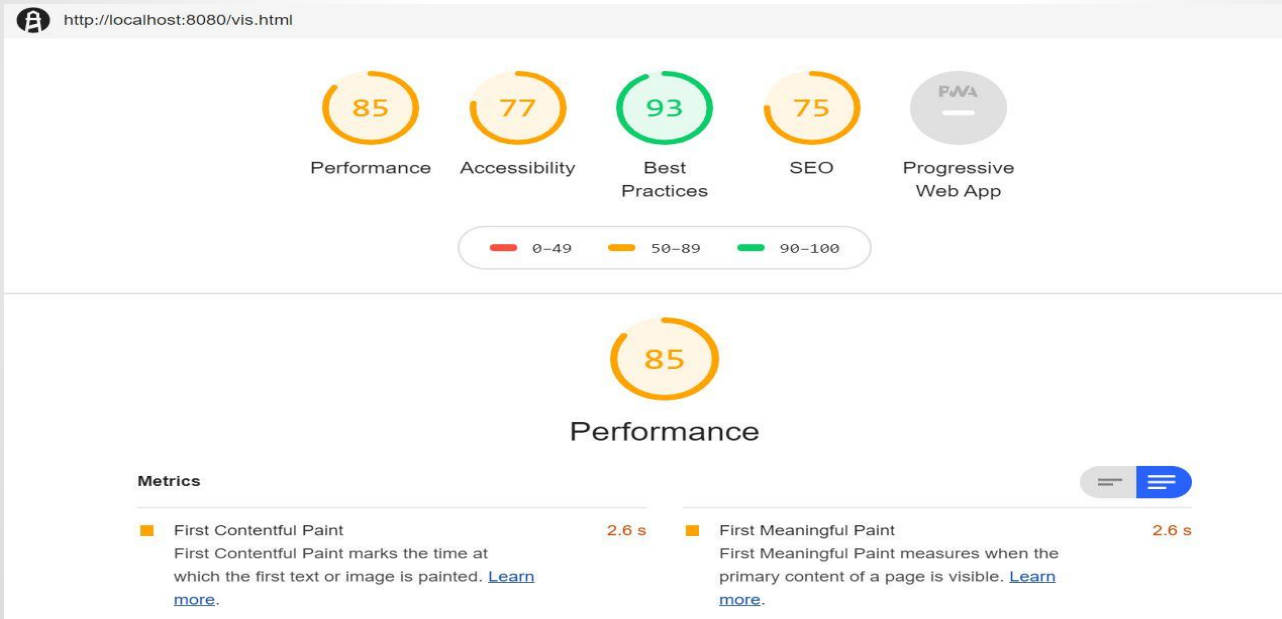
Evaluations

CSV to JSON Converter



Evaluations

Performance of the visualization is evaluated using LightHouse Tool.



Conclusions and Future Work

- ❖ This visualization solves the problem of travel planning by collating all the required information in one place.
- ❖ D3 is the best fit for developing custom visualization as it provides ease of development, excellent DOM manipulation. D3's use of explicit transformations and native representation deliver improved performance.
- ❖ The future scope would be to integrate a map and Geo-plot the AirBnB's and display the distance between the places suggested to stay, visit and eat.

