Report

Author: 240002187

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In the design of data processing, I used the carbon footprint value as the key point of the study, and analysed the transportation, social, age, and gender of urban residents' activities. We found many interesting conclusions. For example, 1. the average carbon footprint of walking, which we think is an environmentally friendly way of travel, and private car travel, which we generally think is not environmentally friendly, are very similar. 2. Men have a lower carbon footprint than women. 3. Carbon footprint emission is highest in the 26-30 age group. 4. Socializing for 1-2 hours has the highest carbon footprint.

In UI design, I also added a link to the data source and a brief description on the panel. I also added buttons that can be filtered. The images can also interact with each other and change accordingly. When our mouse clicks on the bar, there will be a filtering function. When our mouse moves to the bar or points, there will be many necessary details.

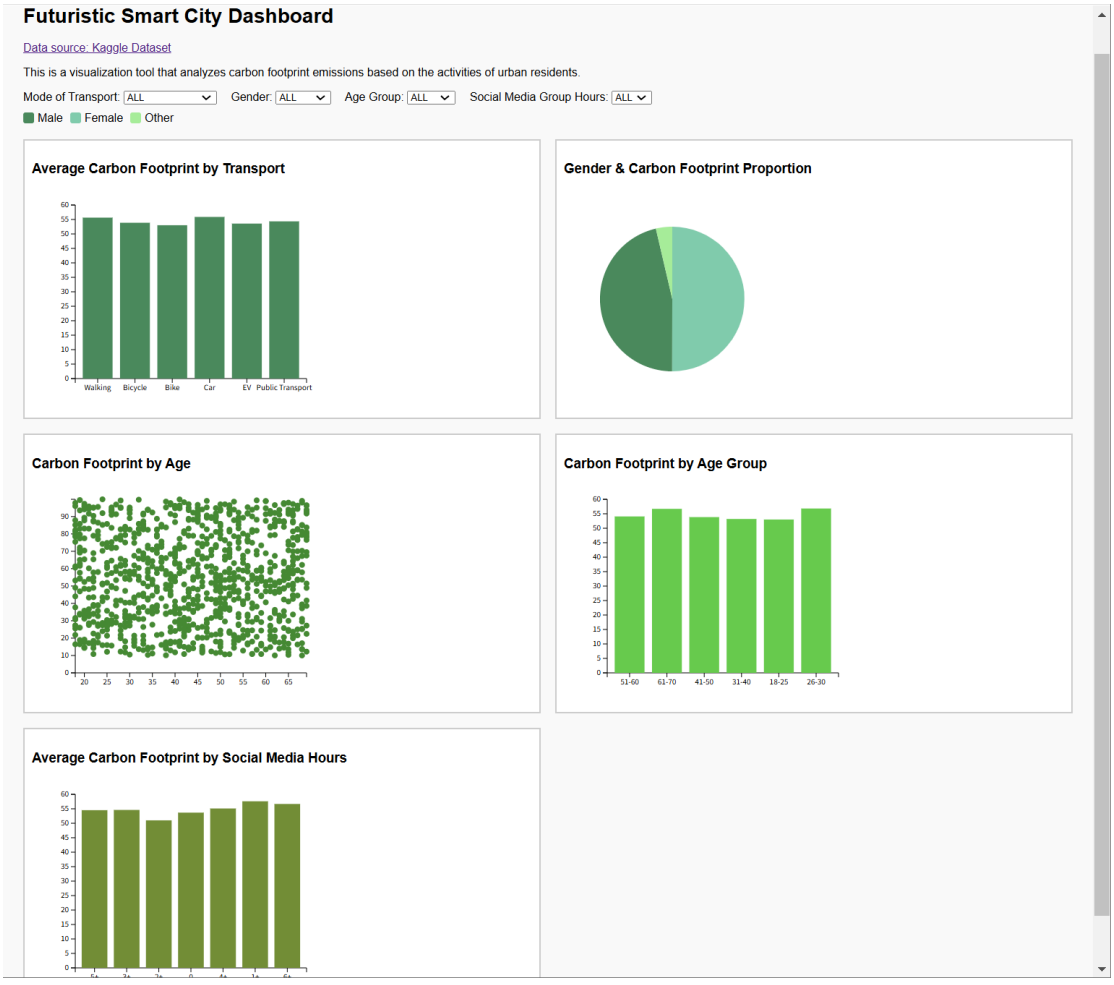

Figure1: General appearance of the website

We also thought that this data could be processed first, then visualized and filtered, so the results returned were ideal.

Citizen_ID	Age	Gender	Mode_of_T	Work_Hou	Shopping_	Entertainm	Home_Ene	Charging_	Carbon_Fo	Steps_Wall	Calories_B	Sleep_Hou	Social_Me	Public_Events_Hours
1001	56	Female	Walking	5	2	0	5.32	0	44.7	15635	975	9.2	5.8	0.5
1002	69	Male	Bicycle	0	2	2	2.19	0	92.39	1671	455	8.1	5.5	1.9
1003	46	Male	Bike	0	4	0	4.68	0	78.57	1777	324	4.7	3.8	2.8
1004	32	Male	Car	7	2	3	3.42	0	55.46	4022	537	4.9	3.5	0.5
1005	60	Male	Walking	3	3	1	2.79	0	98.95	19244	1414	6.6	2.2	0.5
1006	25	Male	Walking	0	1	3	9.65	0	51.87	14817	1104	5.2	0.1	1.3
1007	38	Male	EV	9	0	1	6.79	1	15.24	15260	997	4.2	0.8	2.4
1008	56	Male	EV	6	4	2	7.83	0	33.6	2074	346	8.8	4.5	0.9
1009	36	Male	Bike	4	3	1	4.52	0	49.25	10908	663	4.1	2.8	0.8
1010	40	Female	Car	4	0	0	5.15	0	24.12	10475	853	9	0.9	1.9
1011	28	Female	Walking	0	0	3	3.9	1	95.28	13878	926	4.9	1.6	1.6
1012	28	Female	Bike	9	4	1	2.78	0	79.02	16120	1019	9.8	5.7	0.2
1013	41	Female	Bike	5	3	3	3.43	0	34.15	2986	387	7.6	2.2	0.2
1014	53	Female	Public Trar	8	0	2	8.38	1	63.17	11825	815	8.4	5.4	1.9
1015	57	Male	EV	8	0	2	7.42	0	74.93	10193	812	4.7	1.8	1.4
1016	41	Female	Car	7	3	0	6.38	0	94.72	18430	1081	9.2	3.3	2.9
1017	20	Female	Walking	4	2	2	5.8	0	89.35	3176	507	9	0.1	2
1018	39	Female	Bike	0	0	1	9.38	0	56.37	19722	1383	7.9	3.1	0
1019	19	Male	Walking	8	1	2	2.58	0	79.72	11047	664	7	3.8	1.4
1020	41	Male	Public Trar	0	3	0	4.24	1	60.59	17884	1389	8.3	1.4	1.2
1021	61	Male	Car	7	0	3	4.8	0	59.74	19617	1334	4	3.5	0.3
1022	47	Male	Bike	4	4	3	8.26	1	20.33	5608	464	7.6	3.9	2.8
1023	55	Female	Walking	2	1	2	9.94	0	21.35	12906	764	9.1	4.1	2.4

smart_city_citizen_activity

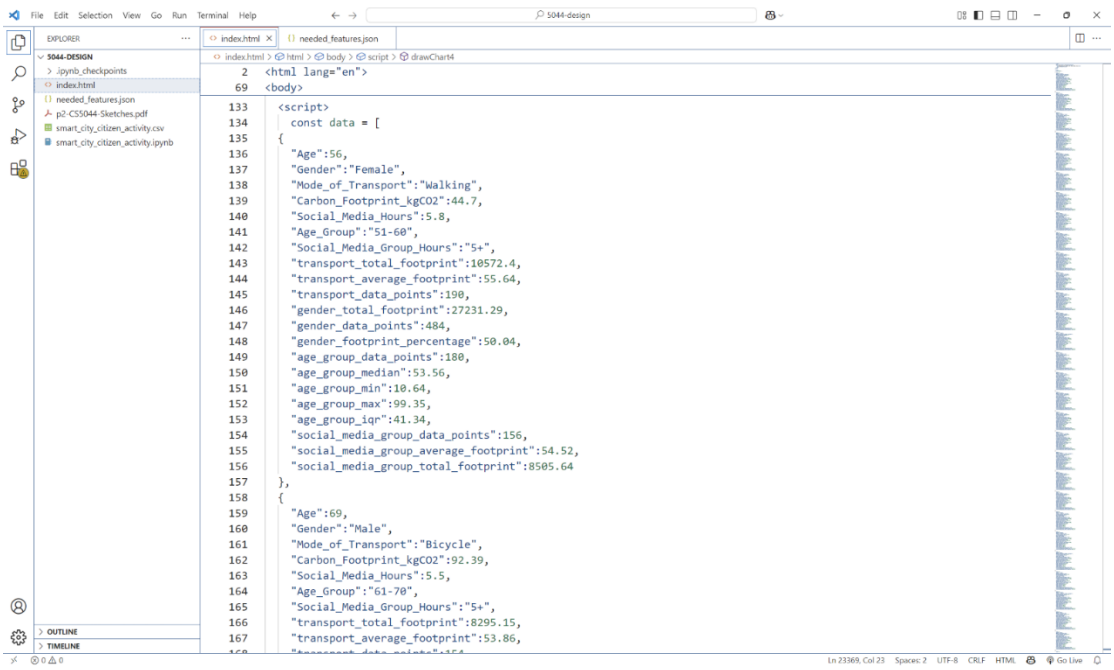

Figure2: Data sets

In D3 Programming, I found that when we defined the intervals, the order of the images produced was chaotic because they were not in natural numerical order. We tried to solve this problem with our own method. We sorted these intervals, renamed them, and finally succeeded. In this P2 I learned problem-solving skills