

Activity -6 Data Visualization

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Task -1 I have created a file in the github and uploaded the [Activity6_Population.csv](#) and [bubblechart.csv](#) and named the files as **Activity-6 Datasets** which is be available in my github , the link is present below https://github.com/Nithishkaranam2002/Activity-6_Datasets

The screenshot shows a GitHub Gist page with the title "Activity6_population.csv". The content is a large CSV file with 17 rows of data. The columns include Country, Country code, and various population statistics. The data spans from 1949 to 2018. The GitHub interface includes a "Create public gist" button at the bottom right.

| Country | Country code | 554419 | 569989 | 582576 | 593366 | 603052 | 612242 | 621363 | 630678 | 648296 | 650213 | 660488 | 670953 | 682183 | 694305 | |
|----------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| China | 156 | 376325 | 382377 | 388799 | 395544 | 402579 | 409881 | 417443 | 425271 | 433381 | 441799 | 450548 | 459642 | 469977 | 478826 | 488432 |
| India | 356 | 158804 | 168872 | 174066 | 185919 | 195945 | 205945 | 21505 | 225751 | 235981 | 246174 | 256254 | 266331 | 276414 | 286490 | 296490 |
| United States of America | 840 | 69543 | 78460 | 72275 | 73821 | 75488 | 77273 | 79179 | 81284 | 85751 | 90898 | 92518 | 95015 | 97597 | 100267 | 103045 |
| Indonesia | 368 | 37542 | 37993 | 38517 | 39169 | 39767 | 40488 | 41278 | 42111 | 43811 | 43971 | 44989 | 46065 | 47199 | 48387 | 49628 |
| Pakistan | 586 | 53975 | 55686 | 57284 | 58999 | 60749 | 62534 | 64356 | 66221 | 68140 | 70123 | 72179 | 74311 | 76514 | 78773 | 81065 |
| Nigeria | 566 | 37895 | 38786 | 39490 | 40292 | 41519 | 42802 | 43114 | 44535 | 45423 | 46701 | 48014 | 49363 | 50752 | 52282 | 53742 |
| Russian Federation | 643 | 162799 | 184385 | 185967 | 187727 | 190937 | 111314 | 114914 | 116622 | 118278 | 119872 | 121404 | 122858 | 124432 | 126056 | 127671 |
| Mexico | 484 | 27945 | 28750 | 29598 | 30469 | 31389 | 32251 | 33355 | 34402 | 35488 | 36612 | 37772 | 38966 | 40195 | 41462 | 42771 |
| Ethiopia | 231 | 18126 | 18467 | 18826 | 19144 | 19547 | 19947 | 20348 | 20746 | 21145 | 21511 | 22082 | 22521 | 23798 | 24397 | 25084 |
| Philippines | 688 | 18588 | 19247 | 19945 | 20670 | 21415 | 22177 | 22956 | 23752 | 24567 | 25486 | 26270 | 27161 | 28077 | 29013 | 29959 |
| Egypt | 918 | 28452 | 29549 | 21474 | 22828 | 22616 | 23223 | 23862 | 24525 | 25290 | 25913 | 26633 | 27366 | 28112 | 28871 | 29045 |
| Viet Nam | 794 | 24818 | 25365 | 25977 | 26597 | 27203 | 27907 | 28583 | 29283 | 29983 | 30683 | 31365 | 32043 | 32857 | 33282 | 33771 |
| Democratic Republic of the Congo | 188 | 12184 | 12429 | 12681 | 12944 | 13223 | 13518 | 13808 | 14161 | 14595 | 14872 | 15242 | 15630 | 16041 | 16462 | 16904 |
| Turkey | 792 | 21408 | 21951 | 22589 | 23082 | 23369 | 24271 | 24886 | 25515 | 26156 | 26899 | 27472 | 28147 | 28833 | 29531 | 30244 |
| | | | | | | | | | | | | | | | | |

I clicked on the Raw data and copied the link of the Raw data and then commit the changes , the link to the raw data is

https://raw.githubusercontent.com/Nithishkaranam2002/Activity-6_Datasets/refs/heads/main/Activity6_Population.csv

Which latter I have added in my userData.js in order to fetch the data

The screenshot shows a GitHub Gist page with the title "Nithishkaranam2002 / Activity6_population.csv". The content is a large CSV file with 29 rows of data. The columns include Country, Country code, and various population statistics. The data spans from 1949 to 2018. The GitHub interface includes options like "Unsubscribe", "Edit", "Delete", and "Download ZIP".

| Country | Country code | 554419 | 569989 | 582576 | 593366 | 603052 | 612242 | 621363 | 630678 | 648296 | 650213 | 660488 | 670953 | 682183 | 694305 | |
|----------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| China | 156 | 376325 | 382377 | 388799 | 395544 | 402579 | 409881 | 417443 | 425271 | 433381 | 441799 | 450548 | 459642 | 469977 | 478826 | 488432 |
| India | 356 | 158804 | 168872 | 174066 | 185919 | 195945 | 205945 | 21505 | 225751 | 235981 | 246174 | 256254 | 266331 | 276414 | 286490 | 296490 |
| United States of America | 840 | 69543 | 78460 | 72275 | 73821 | 75488 | 77273 | 79179 | 81284 | 85751 | 90898 | 92518 | 95015 | 97597 | 100267 | 103045 |
| Indonesia | 368 | 37542 | 37993 | 38517 | 39169 | 39767 | 40488 | 41278 | 42111 | 43811 | 43971 | 44989 | 46065 | 47199 | 48387 | 49628 |
| Pakistan | 586 | 53975 | 55686 | 57284 | 58999 | 60749 | 62534 | 64356 | 66221 | 68140 | 70123 | 72179 | 74311 | 76514 | 78773 | 81065 |
| Nigeria | 566 | 37895 | 38786 | 39490 | 40292 | 41519 | 42802 | 43114 | 44535 | 45423 | 46701 | 48014 | 49363 | 50752 | 52282 | 53742 |
| Russian Federation | 643 | 162799 | 184385 | 185967 | 187727 | 190937 | 111314 | 114914 | 116622 | 118278 | 119872 | 121404 | 122858 | 124432 | 126056 | 127671 |
| Mexico | 484 | 27945 | 28750 | 29598 | 30469 | 31389 | 32251 | 33355 | 34402 | 35488 | 36612 | 37772 | 38966 | 40195 | 41462 | 42771 |
| Ethiopia | 231 | 18126 | 18467 | 18826 | 19144 | 19547 | 19947 | 20348 | 20746 | 21145 | 21511 | 22082 | 22521 | 23798 | 24397 | 25084 |
| Philippines | 688 | 18588 | 19247 | 19945 | 20670 | 21415 | 22177 | 22956 | 23752 | 24567 | 25486 | 26270 | 27161 | 28077 | 28871 | 29644 |
| Egypt | 918 | 28452 | 29549 | 21474 | 22828 | 22616 | 23223 | 23862 | 24525 | 25290 | 25913 | 26633 | 27366 | 28112 | 2887 | 30244 |
| Viet Nam | 794 | 24818 | 25365 | 25977 | 26597 | 27203 | 27876 | 28583 | 29283 | 29983 | 30683 | 31365 | 32043 | 32857 | 33664 | 34466 |
| Democratic Republic of the Congo | 188 | 12184 | 12429 | 12681 | 12944 | 13223 | 13518 | 13808 | 14161 | 14599 | 14872 | 15242 | 15630 | 16041 | 16462 | 16904 |
| Turkey | 792 | 21408 | 21951 | 22589 | 23082 | 23369 | 24271 | 24886 | 25515 | 26156 | 26899 | 27472 | 28147 | 28833 | 29531 | 30244 |
| Iran (Islamic Republic of) | 364 | 17119 | 17517 | 17934 | 18369 | 18823 | 19294 | 19783 | 20289 | 20811 | 21351 | 21916 | 22477 | 22908 | 23431 | 23962 |
| Germany | 276 | 69966 | 70300 | 70826 | 70938 | 71233 | 71537 | 71851 | 72283 | 72548 | 72956 | 73414 | 73928 | 74489 | 75066 | 75637 |
| Thailand | 764 | 20718 | 21263 | 21838 | 22437 | 23061 | 23711 | 24390 | 25097 | 25834 | 26680 | 27397 | 28224 | 29086 | 29808 | 30530 |
| United Kingdom | 826 | 58616 | 58682 | 59651 | 59751 | 59891 | 51664 | 51266 | 51496 | 51755 | 52046 | 52371 | 52728 | 53116 | 53494 | 53871 |
| France | 250 | 41834 | 42831 | 42316 | 42655 | 43825 | 43411 | 43869 | 44223 | 44659 | 45138 | 45673 | 46267 | 46997 | 4756 | 48196 |
| Italy | 388 | 46599 | 47018 | 47391 | 47737 | 48851 | 48336 | 48599 | 48852 | 49110 | 49388 | 49708 | 50082 | 50442 | 50886 | 51328 |
| United Republic of Tanzania | 834 | 7658 | 7845 | 8851 | 8267 | 8494 | 8738 | 8975 | 9238 | 9494 | 9768 | 10085 | 10401 | 10718 | 11036 | 11354 |
| South Africa | 710 | 13628 | 13922 | 14226 | 14542 | 14864 | 15287 | 15557 | 15921 | 16299 | 16691 | 17108 | 17525 | 17946 | 18363 | 18781 |
| Myanmar | 184 | 17780 | 18104 | 18441 | 18793 | 19162 | 19596 | 19956 | 20388 | 20820 | 21273 | 21737 | 22212 | 22698 | 2319 | 23671 |
| Kenya | 484 | 6877 | 6242 | 6416 | 6598 | 6789 | 7195 | 7412 | 7638 | 7874 | 8128 | 8378 | 8647 | 8929 | 9198 | 9468 |
| Republic of Korea | 410 | 19211 | 19483 | 19818 | 20293 | 20864 | 21515 | 22227 | 22984 | 23766 | 24583 | 25338 | 2608 | 26856 | 27598 | 28351 |
| Colombia | 170 | 11982 | 12296 | 12634 | 12994 | 13375 | 13757 | 14195 | 14633 | 15098 | 15565 | 16058 | 16568 | 1706 | 1757 | 1807 |

https://raw.githubusercontent.com/Nithishkaranam2002/Activity-6_Datasets/refs/heads/main/Activity6_Population.csv

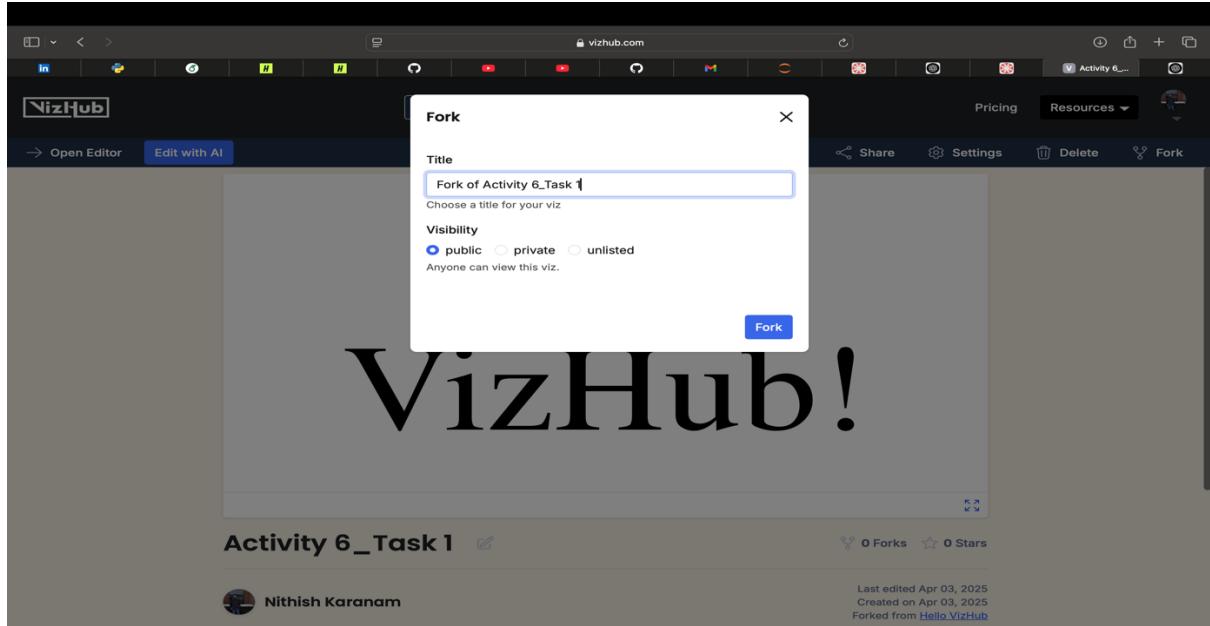
| Country | Country code | 554110 | 559000 | 592576 | 592365 | 600059 | 612942 | 601360 | 600598 | 600992 | 600212 | 600499 | 600593 | 600108 | 600130 | 700255 | 700100 | 700115 | 700581 | 700105 | 005995 | | | | |
|--------------------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| Burundi | BUR | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | | | | | |
| Burma | MYS | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | | | | | |
| China | CHE | 156 | 376325 | 382377 | 388793 | 395544 | 402579 | 409881 | 417443 | 425271 | 433381 | 441799 | 450548 | 459642 | 469077 | 478824 | 488848 | 499123 | 509632 | 520401 | 531514 | 543084 | 555190 | | |
| China | CHE | 1218817 | 1230020 | 1240921 | 1251636 | 1261996 | 1271982 | 1281515 | 1290551 | 1299130 | 1307352 | 1315304 | 1323085 | 1330776 | 1338409 | 1345994 | 1353569 | 1361169 | 1368611 | 1376498 | 1384206 | 1391883 | 1399454 | 1406848 | |
| China | CHE | 567868 | 581087 | 594770 | 608083 | 623103 | 637630 | 652407 | 667509 | 682995 | 689953 | 715385 | 732239 | 749429 | 766833 | 784360 | 81975 | 837478 | 891273 | 903307 | 927404 | 944447 | 961560 | 978209 | |
| China | CHE | 1338677 | 1352642 | 1364418 | 138004 | 138058 | 139348 | 140328 | 142344 | 142354 | 143593 | 150567 | 156546 | 160304 | 1620607 | 1625780 | 1628042 | 1629561 | 1631052 | 1632451 | 1634517 | 1635617 | 1636713 | 163878 | 163956 |
| India | IND | 356 | 158804 | 160972 | 163266 | 165910 | 168736 | 171685 | 174701 | 177751 | 180788 | 183784 | 186721 | 189579 | 192314 | 194992 | 197408 | 199734 | 201896 | 203905 | 205804 | 207659 | 209513 | 211367 | |
| India | IND | 232570 | 234270 | 235960 | 237650 | 239350 | 241050 | 242750 | 244450 | 246150 | 247850 | 249550 | 251250 | 252950 | 254650 | 256350 | 258050 | 259750 | 261450 | 263150 | 264850 | 266550 | 268250 | 270050 | |
| India | IND | 262241 | 265164 | 268335 | 270156 | 271715 | 275175 | 278548 | 284408 | 287279 | 294994 | 297759 | 300601 | 303486 | 306303 | 309011 | 311584 | 314044 | 316401 | 318673 | 320878 | 323016 | 325016 | 327098 | |
| India | IND | 325085 | 327098 | 329965 | 331003 | 332559 | 334259 | 335959 | 337659 | 339359 | 341059 | 342759 | 344459 | 346159 | 347859 | 349559 | 351259 | 352959 | 354659 | 356359 | 358059 | 359759 | 361459 | 363159 | |
| Uruguay | URY | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | |
| Uruguay | URY | 108780 | 111759 | 114793 | 117788 | 121017 | 124200 | 127422 | 130681 | 133967 | 137278 | 140622 | 144010 | 147448 | 150938 | 154468 | 158009 | 161523 | 164982 | 168374 | 171703 | 174976 | 178209 | 181413 | |
| Uruguay | URY | 184592 | 187740 | 190591 | 193917 | 196934 | 199901 | 202824 | 205861 | 211514 | 214427 | 217358 | 220309 | 223286 | 226219 | 229311 | 232374 | 235470 | 238621 | 241834 | 245116 | 248452 | 251805 | 254805 | |
| Uruguay | URY | 229370 | 232570 | 235960 | 237650 | 241050 | 242750 | 244450 | 246150 | 247850 | 249550 | 251250 | 252950 | 254650 | 256350 | 258050 | 259759 | 261450 | 263150 | 264850 | 266550 | 268250 | 270050 | 271850 | |
| Indonesia | IDN | 360 | 37542 | 37993 | 38517 | 39109 | 39767 | 40488 | 41270 | 42111 | 43011 | 43971 | 44989 | 46065 | 47399 | 48387 | 49628 | 50918 | 52260 | 53656 | 55103 | 56598 | 58142 | 595113 | |
| Indonesia | IDN | 59734 | 61382 | 63098 | 64906 | 66817 | 68834 | 70958 | 73197 | 75561 | 78054 | 80860 | 83432 | 86286 | 92192 | 95215 | 99286 | 101390 | 104513 | 107648 | 110779 | 113911 | 117087 | 120805 | |
| Indonesia | IDN | 127747 | 130448 | 133057 | 134843 | 136625 | 138625 | 142344 | 145950 | 150567 | 156665 | 160304 | 164024 | 167808 | 171649 | 175926 | 179425 | 183340 | 187180 | 191261 | 195303 | 199427 | 203631 | 207613 | |
| Pakistan | PAK | 586 | 53975 | 55606 | 57284 | 58904 | 60749 | 62534 | 6466 | 66221 | 68184 | 70123 | 72179 | 74146 | 76514 | 78770 | 81065 | 83370 | 85697 | 88316 | 90460 | 924747 | 95113 | 974747 | |
| Pakistan | PAK | 207806 | 212224 | 216565 | 220892 | 229575 | 237045 | 243110 | 24925 | 25539 | 261596 | 267701 | 273806 | 279901 | 286006 | 292101 | 298206 | 304301 | 310403 | 315138 | 318259 | 321369 | 324359 | 327369 | 330369 |
| Russia | RUS | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 | |
| Russia | RUS | 58666 | 60115 | 61677 | 63374 | 65221 | 67203 | 69272 | 71361 | 73424 | 75447 | 77428 | 79415 | 81449 | 83563 | 85766 | 88048 | 90395 | 92788 | 95212 | 97660 | 100162 | 102701 | 105294 | |
| Nigeria | NGA | 566 | 37895 | 38708 | 39490 | 40292 | 41150 | 42086 | 43114 | 44233 | 45435 | 46701 | 48014 | 49363 | 50752 | 52202 | 53742 | 55385 | 57158 | 59034 | 60918 | 62680 | 644232 | 65532 | |
| Nigeria | NGA | 66626 | 67538 | 68743 | 70066 | 71652 | 73464 | 75464 | 77469 | 79639 | 81393 | 83142 | 85162 | 87186 | 90571 | 93188 | 95671 | 98186 | 100693 | 103172 | 105999 | 110351 | 112738 | 115680 | |
| Russia | RUS | 161377 | 163041 | 164649 | 166449 | 168449 | 170449 | 172449 | 174449 | 176449 | 178449 | 180449 | 182449 | 184449 | 186449 | 188449 | 190449 | 192449 | 194449 | 196449 | 198449 | 200449 | 202447 | 206163 | |
| Russian Federation | RUS | 643 | 102977 | 104405 | 105907 | 107427 | 108947 | 110467 | 111987 | 113504 | 115124 | 116644 | 118164 | 119684 | 121204 | 122724 | 124244 | 125764 | 127284 | 128804 | 129324 | 130844 | 132364 | 133884 | |
| Russian Federation | RUS | 122933 | 124031 | 125150 | 126176 | 127193 | 128210 | 129227 | 130244 | 131261 | 132278 | 133295 | 134312 | 135330 | 136347 | 137364 | 138381 | 139398 | 140415 | 141432 | 142450 | 143467 | 144484 | 145501 | |
| Russian Federation | RUS | 148269 | 148374 | 148349 | 148227 | 148021 | 147730 | 147361 | 146916 | 146403 | 145831 | 145216 | 144611 | 144081 | 143672 | 143237 | 143849 | 144379 | 144973 | 145513 | 146040 | 146645 | 147277 | 147977 | |
| Mexico | MEX | 448 | 57945 | 59687 | 61242 | 62870 | 64495 | 66124 | 67761 | 69408 | 71059 | 72709 | 74353 | 75983 | 77599 | 79200 | 80879 | 82369 | 83943 | 85513 | 87075 | 88625 | 90156 | 91663 | |
| Mexico | MEX | 54690 | 56324 | 57967 | 59568 | 61242 | 62870 | 64495 | 66124 | 67761 | 69408 | 71059 | 72709 | 74353 | 75983 | 77599 | 79200 | 80879 | 82369 | 83943 | 85513 | 87075 | 88625 | 90156 | 91663 |
| Japan | JPN | 392 | 82802 | 84316 | 85659 | 86870 | 87981 | 89018 | 90094 | 91984 | 92782 | 93674 | 94561 | 95459 | 96389 | 97379 | 98447 | 99596 | 100822 | 102124 | 103496 | 104929 | 106421 | 107901 | |
| Japan | JPN | 106653 | 108756 | 110853 | 112143 | 113679 | 114828 | 116067 | 117817 | 118737 | 119717 | 120687 | 121667 | 122647 | 123626 | 124605 | 125585 | 126465 | 127345 | 128224 | 129103 | 130983 | 132863 | 134743 | |
| Japan | JPN | 125365 | 126444 | 126893 | 128057 | 129276 | 130434 | 131594 | 132753 | 133805 | 134853 | 135943 | 136260 | 137319 | 138305 | 139394 | 140385 | 141375 | 142357 | 143337 | 144317 | 145296 | 146276 | 147256 | |
| Japan | JPN | 127503 | 1272602 | 128660 | 129476 | 130434 | 131594 | 132753 | 133805 | 134853 | 135943 | 136260 | 137319 | 138305 | 139394 | 140385 | 141375 | 142357 | 143337 | 144317 | 145296 | 146276 | 147256 | 148234 | |
| Japan | JPN | 149951 | 150381 | 151037 | 151861 | 152567 | 153268 | 153977 | 154688 | 155384 | 156083 | 156782 | 157482 | 158182 | 158872 | 159572 | 160272 | 160972 | 161672 | 162372 | 163072 | 163772 | 164472 | 165172 | |
| Vietnam | VNM | 704 | 24810 | 25355 | 25977 | 26646 | 27370 | 28147 | 28973 | 29844 | 30754 | 31698 | 32670 | 33666 | 34682 | 35721 | 36780 | 37859 | 38958 | 40073 | 41194 | 42207 | 43405 | 44468 | |
| Vietnam | VNM | 94468 | 45548 | 46604 | 47650 | 48718 | 49785 | 50586 | 51593 | 53095 | 54826 | 56014 | 58148 | 59513 | 60897 | 62294 | 63729 | 65120 | 66550 | 67989 | 69437 | 70883 | 72300 | 73651 | |
| Vietnam | VNM | 74910 | 76049 | 77133 | 78116 | 79316 | 80763 | 81334 | 82302 | 83063 | 83813 | 84618 | 85420 | 86243 | 87092 | 87968 | 88721 | 89802 | 90753 | 91714 | 92677 | 936401 | 94556 | | |

Then I opened the vizhub and selected the most forked one with the Hello VizHub! In ordered to fork that one

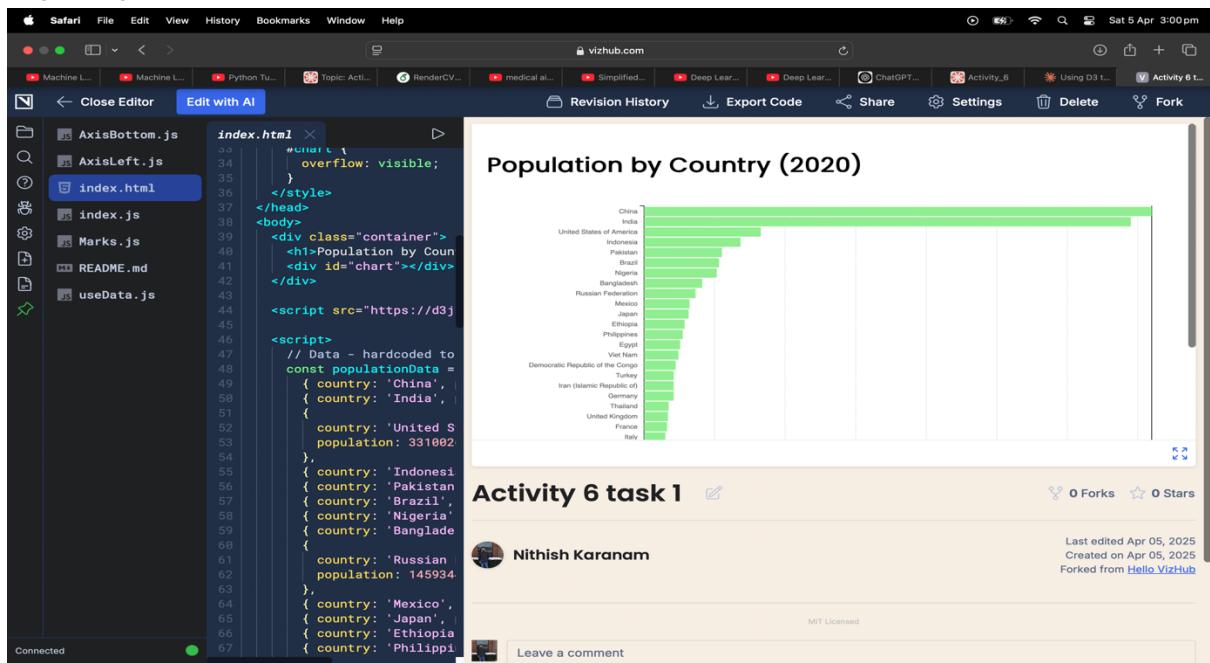
The screenshot shows the VizHub interface with the following details:

- Header:** Shows the URL "Join VizHub Office Hours! Get personalized help with your data visualization projects and connect with the community via Discord." and buttons for "Watch Videos" and "Register Now".
- Section Headers:** "Explore" and "Hello VizHub".
- Sort by:** A dropdown menu set to "Most forked" with options "Most popular" and "Most recent".
- Visualizations:**
 - "Hello HTML!" visualization: A bar chart with three yellow bars. The first bar has the text "Hello HTML!".
 - "Hello D3" visualization: A bar chart with three yellow bars. The first bar has the text "Hello D3".
 - A third visualization featuring a large yellow smiley face icon.

And I named it as Activity 6 Task 1 and I just forked it and I kept public for all accessing it



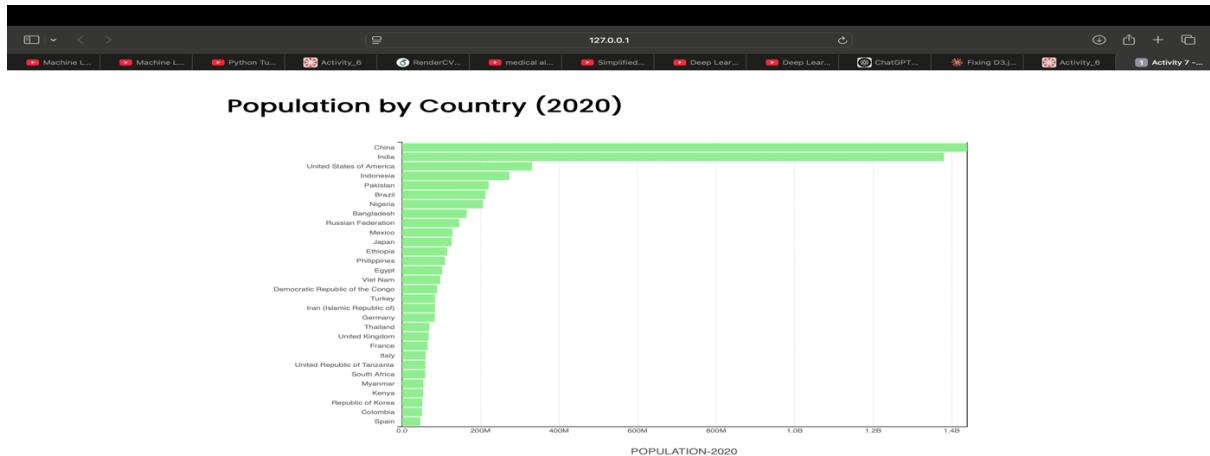
Here is the visualization of the data population by country (2020) , which I have provided the link of it



this is the link of the code in my Vizhub

<https://vizhub.com/Nithishkaranam2002/7a21d14531b84f11bb7c7de3d514dd70>

The Visualization is shown here :



Task 1 : Question-1: For this assignment, I made a bar chart from the "Activity6_population" dataset showing populations of 10 countries in 2000. Visualization was made by using D3.js. The chart has a single bar for a country, with the country's height representing its population. The country names are shown on the x-axis, while the y-axis has the populations in millions and billions in order for it to be easily read. The chart has a title and axis label so it can also be clear, in addition to being more informative. From doing this assignment, I learned how to use D3 in data binding, in setting up the scales in order to position, as well as in the formatting of numbers so they can be easily read. It showed me how the data can be shown in a simple, as well as interactive, way through data visualization principles.

<https://vizhub.com/Nithishkaranam2002/6e1e77bb90314050ba0d116155156174>

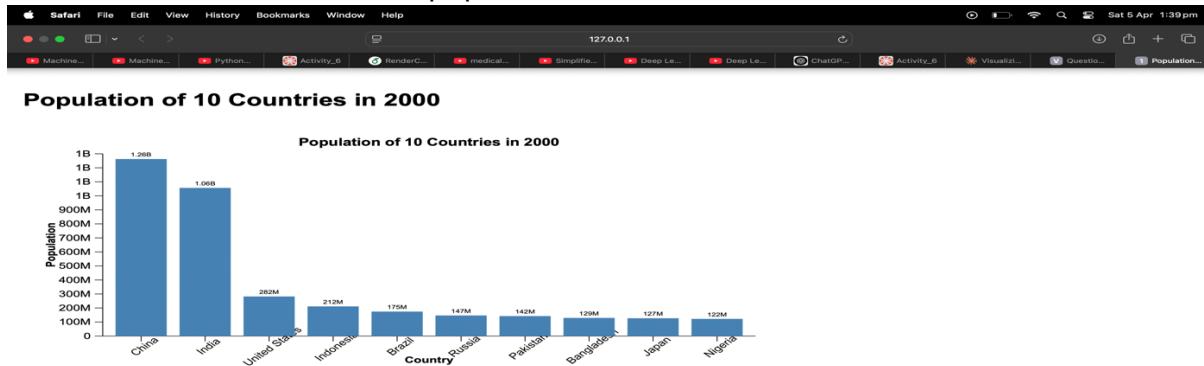
| Country | Population (2000) |
|---------------|-------------------|
| China | 1.26B |
| India | 1.06B |
| United States | 282M |
| Indonesia | 212M |
| Pakistan | 179M |
| Bangladesh | 147M |
| Russia | 142M |
| Mexico | 129M |
| Japan | 127M |
| Egypt | 122M |

Question 1 task 1

Nithish Karanam

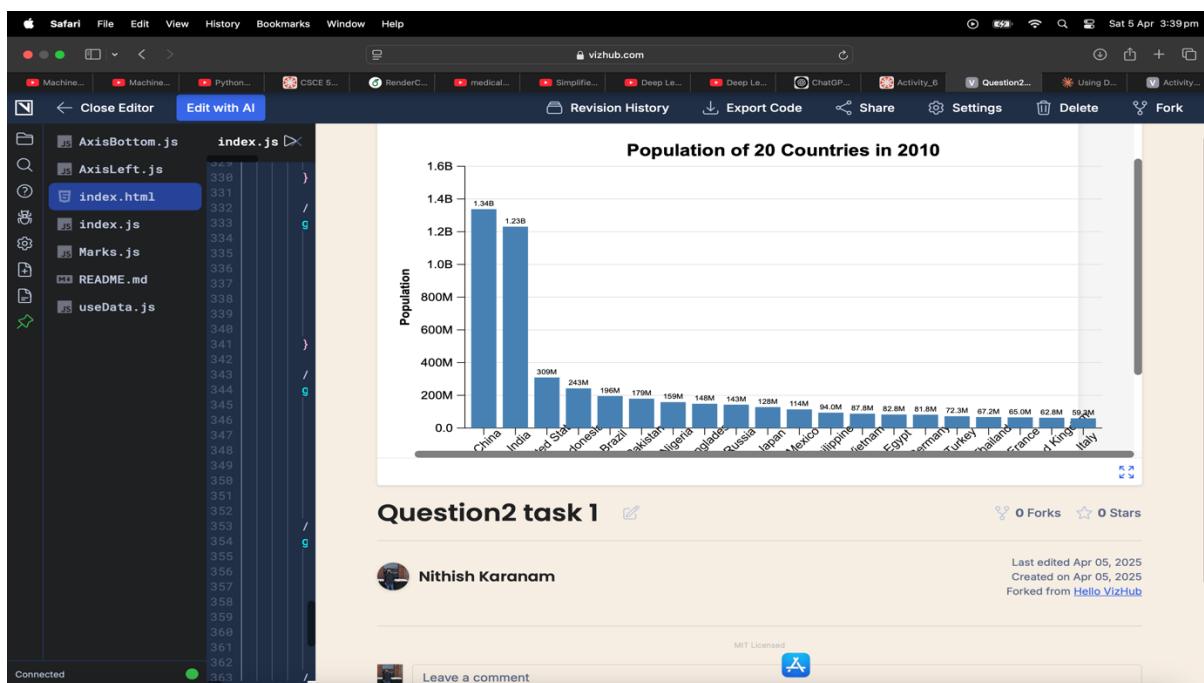
Last edited Apr 05, 2025
Created on Apr 05, 2025
Forked from Hello VizHub

Here is the full Visualization of population of 10 Countries in 2020 :

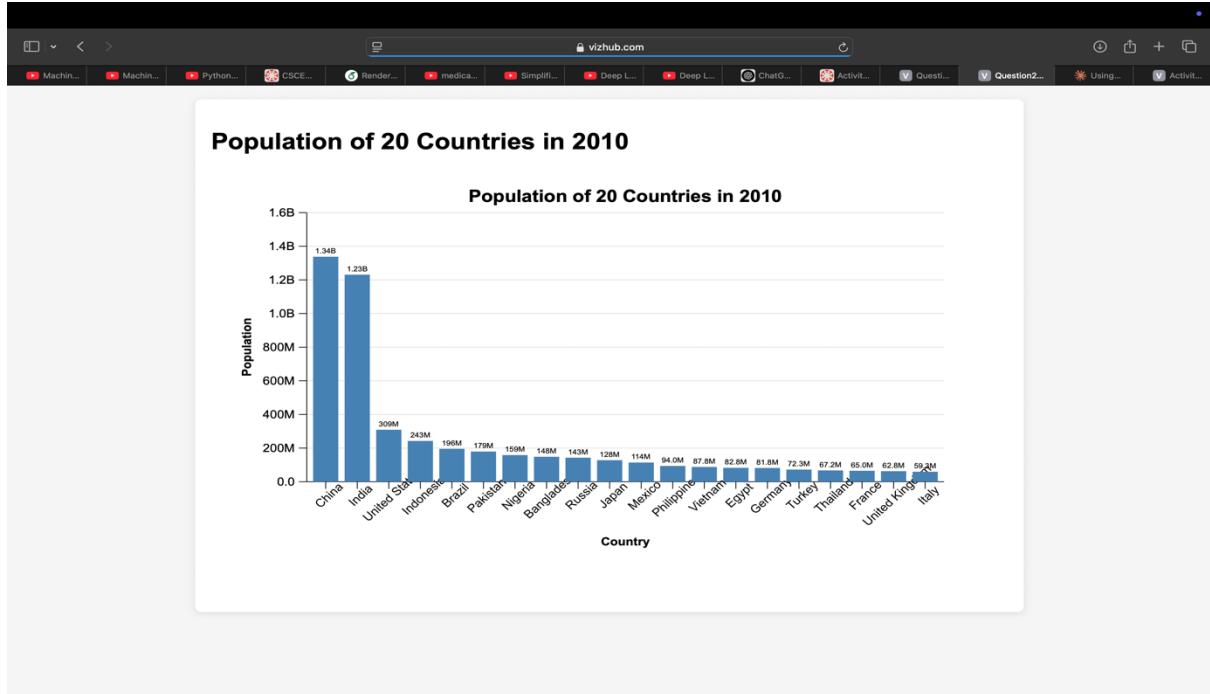


task 1 -Question 2 : I created a bar chart from the “Activity6_population” data set to display the population of 20 countries in the year 2010 for this project. The data was displayed in D3.js, with one country represented by a single bar and the size of the country's population represented by the length of the bar. The country names were displayed in the middle axis, while their populations were shown in the y-axis in a legible style in millions and billions. It was also accompanied by a chart headline and axis label for clear display. From doing this project, I was able to understand how a larger data set would be handled, size up the axes accordingly, and position all the country names in the chart. It also improved my skills in producing legible data presentations in a responsive style in D3.js. Below is the link

<https://vizhub.com/Nithishkaranam2002/f35e9a1c684944189973c77ceeb93ab9>



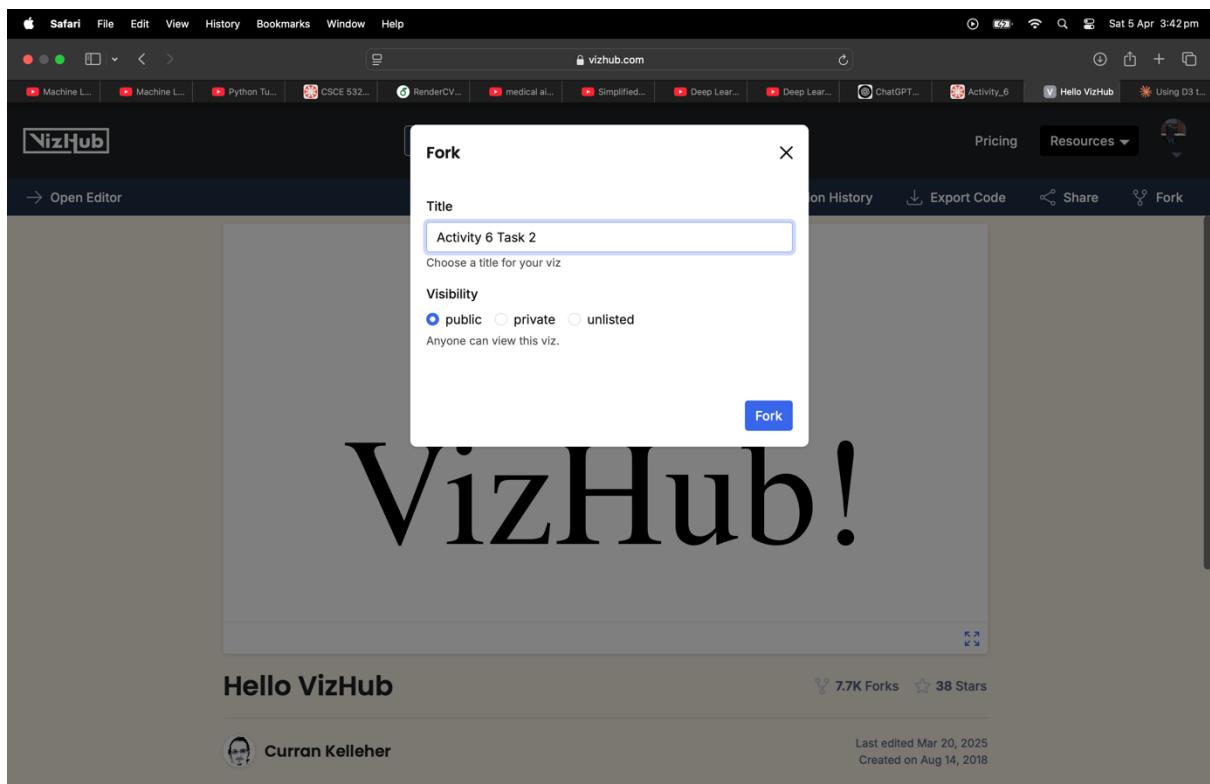
Here is the population of 20 Countries in 2010:



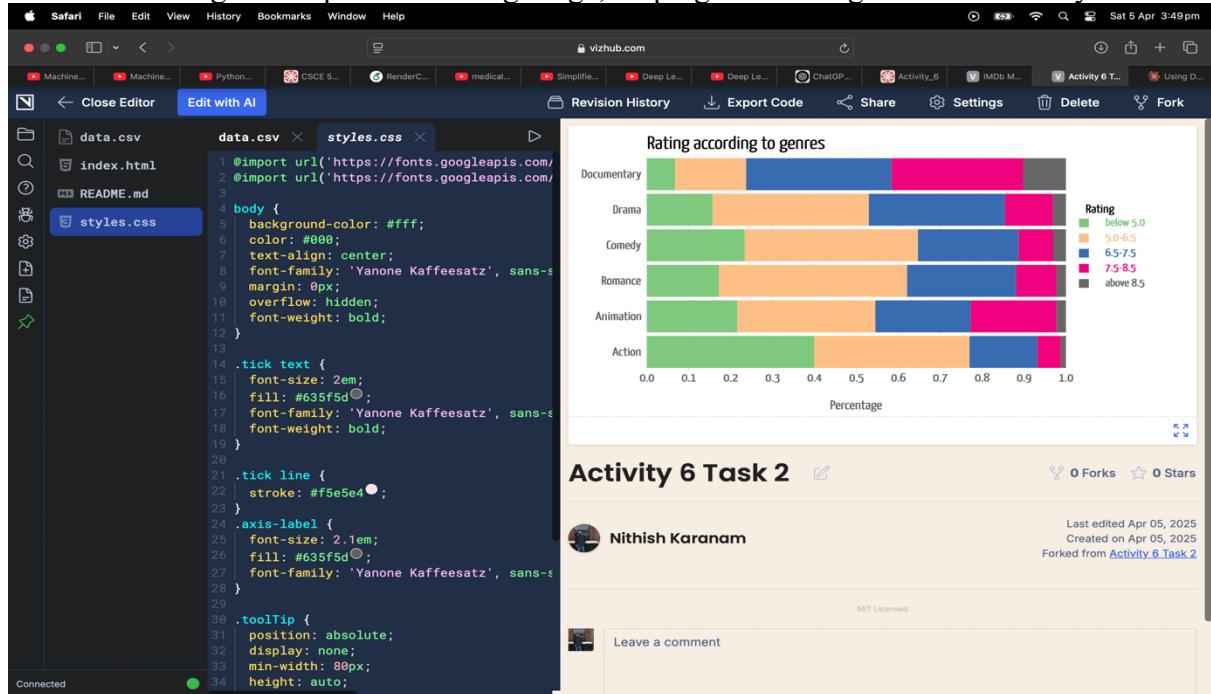
Task -2:

I have created the vizhub for the Task 2 also and named it as Activity 6 Task 2 and fork it

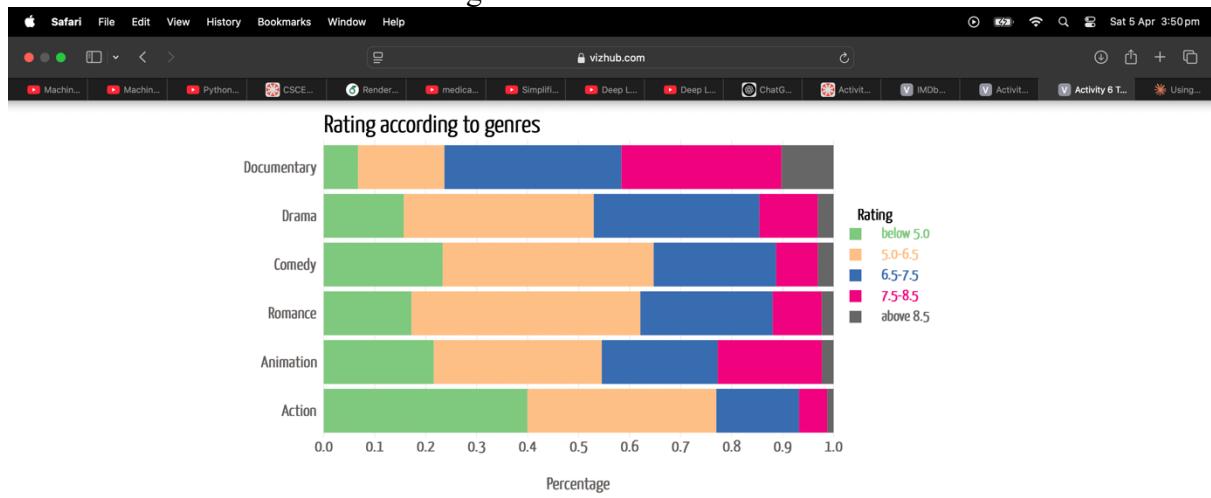
Link : <https://vizhub.com/Nithishkaranam2002/3e0992a406ed44f495082a8b51a852d1>



This stacked bar chart shows the distribution of IMDb movie ratings across different genres. Each colored segment represents rating range, helping visualize genres are rated by viewers.

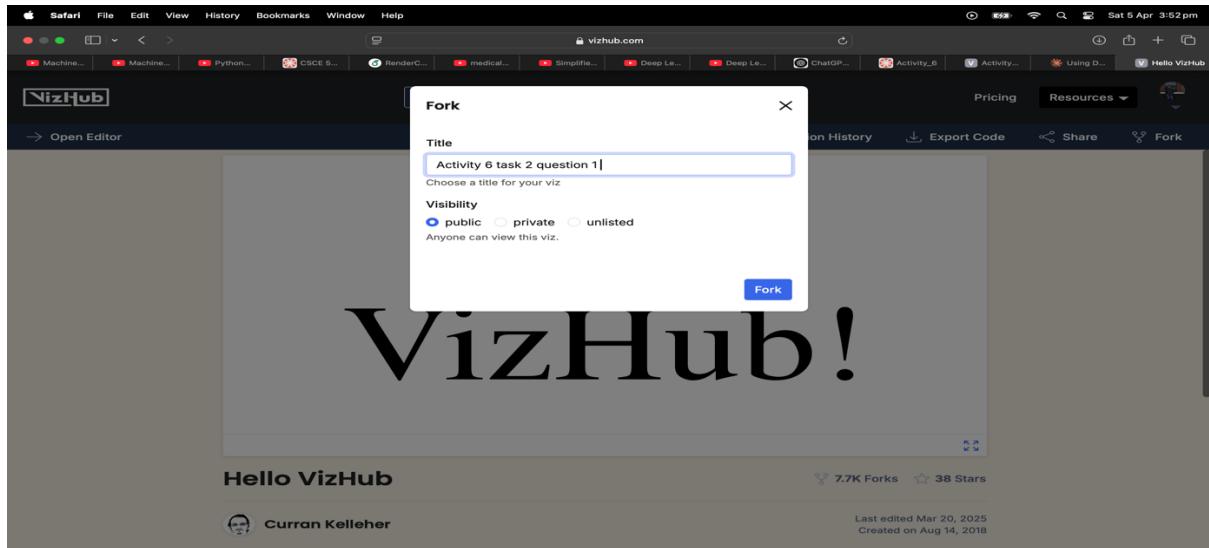


Here is the Full Visualization of the graph with the Rating according to genres with Ratings on X- axis and Y – axis on Percentage



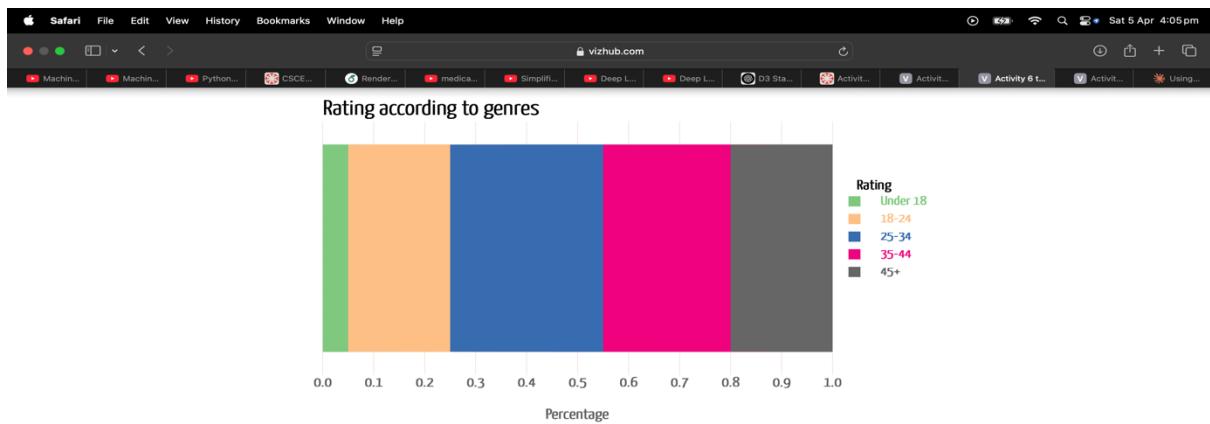
Task -2 Question 1 : I have created the title in named Activity 6 task 2 question 1 and forked

Link : <https://vizhub.com/Nithishkaranam2002/7b8e05340e1746e7823e82961cc78b5f>



The data I used and created a file called data.csv in which I have entered the data in it

A screenshot of the VizHub interface showing a dashboard. On the left, there is a file explorer with files: 'data.csv', 'index.html', 'README.md', and 'styles.css'. The 'data.csv' file is selected. On the right, there is a chart titled 'Rating according to genres' showing the percentage distribution of ratings across five categories: Under 18 (green), 18-24 (orange), 25-34 (blue), 35-44 (pink), and 45+ (grey). Below the chart, the title 'Activity 6 task 2 question 1' is displayed, along with the author's name 'Nithish Karanam' and edit history information. There is also a comment section at the bottom.



Data Description

For this exercise, we've arranged a stacked bar plot of proportion of viewers across groups of age for several streaming services. The services we've worked with are Hulu, Disney+, Amazon Prime, HBO Max, and Apple TV+. The groups of age we've used are Under 18, 18–24, 25–34, 35–44, and 45+. The values are proportion values (between 0 and 1) for distribution of each of these platform's user base across groups. The data provides us with age-group-wise following of several streaming services

Visualization Summary:

I made a stacked bar chart in D3.js, where all the platforms are horizontal bars. The bars are divided into colored sections, with each section showing the percentage of viewers within a given age group. The axis labels, legend for age groups, and percentage value tooltips are all placed within the chart. The names of the streaming outlets are placed along the y-axis, while the percentage scale from 0.0 through 1.0 is placed along the x-axis.

Chart Analysis

Across the diagram, we can observe:

These two services enjoy strong viewership within the segments of people aged 25-34 and 18-24.

Disney+ has the highest percentage of viewers in the Under 18 audience, in line with its child-targeted programming.

Both Apple TV+ and HBO Max draw proportionately more viewers in the older age ranges (35-44 years, 45+ years), which suggests an older audience.

Amazon Prime also demonstrates a good proportion in every age group with a rise in viewers in middle-aged groups. This visualization allows for the comparison of how streaming services appeal to various age groups and offers information that might be valuable for marketing, content strategy, or targeting an audience.

Task - 3 - Scatter Plot

3.1 Link : <https://vizhub.com/Nithishkaranam2002/382c2ff57e994b42b7a310a9fea5b25a>

The screenshot shows a VizHub interface with a code editor on the left and a visualization on the right. The code editor displays a portion of `index.html` containing D3.js code for creating axes and a chart. The visualization is titled "Scatter Plot for the Iris Dataset" and shows Sepal Length on the x-axis (ranging from 4.0 to 8.0) and Petal Length on the y-axis (ranging from 1.0 to 7.0). Data points are colored by species: setosa (blue), versicolor (green), and virginica (orange). Below the plot, the title "Activity 6 task 3" is displayed, along with the author's name "Nithish Karanam" and the date "Last edited Apr 05, 2025".

```
// Create axes
const xScale = d3
    .axisBottom(xScale)
    .ticks(10)
    .tickPadding(10);

const yScale = d3
    .axisLeft(yScale)
    .ticks(10)
    .tickPadding(10);

// Add x-axis
chart
    .append('g')
    .attr('class', 'x-axis')
    .attr('transform', 'translate(0, 40)')
    .call(xAxis);

// Add y-axis
chart
    .append('g')
    .attr('class', 'y-axis')
    .attr('transform', 'rotate(-90deg)')
    .call(yAxis);

// Add x-axis label
chart
    .append('text')
    .attr('class', 'x-axis-label')
    .attr('x', innerWidth / 2)
    .attr('y', innerHeight + 10)
    .attr('text-anchor', 'center')
    .attr('fill', 'grey')
    .text('Sepal Length');
```

3.2 link : <https://vizhub.com/Nithishkaranam2002/3e750ff8b577419191ed05fdff226588>

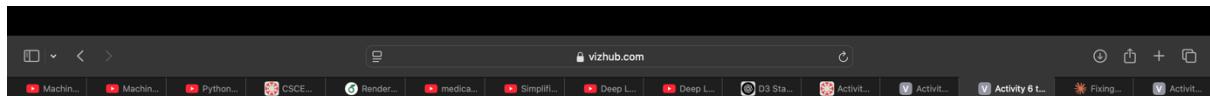
The screenshot shows a VizHub interface with a code editor on the left and a visualization on the right. The code editor displays multiple files: `axes.js`, `index.html`, `scatterPlot.js`, `shapeLegend.js`, `styles.css`, and `viz.js`. The visualization is titled "Activity 6 task 3.2" and shows Sepal Length on the x-axis (ranging from 4.0 to 8.0) and Petal Length on the y-axis (ranging from 1.0 to 7.0). Data points are represented by different shapes: circles for setosa, crosses for versicolor, and diamonds for virginica. A legend titled "Species" is located in the top right corner. Below the plot, the title "Activity 6 task 3.2" is displayed, along with the author's name "Nithish Karanam" and the date "Last edited Apr 05, 2025".

```
const yScale = d3
    .scaleLinear()
    .domain(d3.extent(data, function(d) { return d.petalLength; }))
    .range([height - margin, margin])
    .nice();

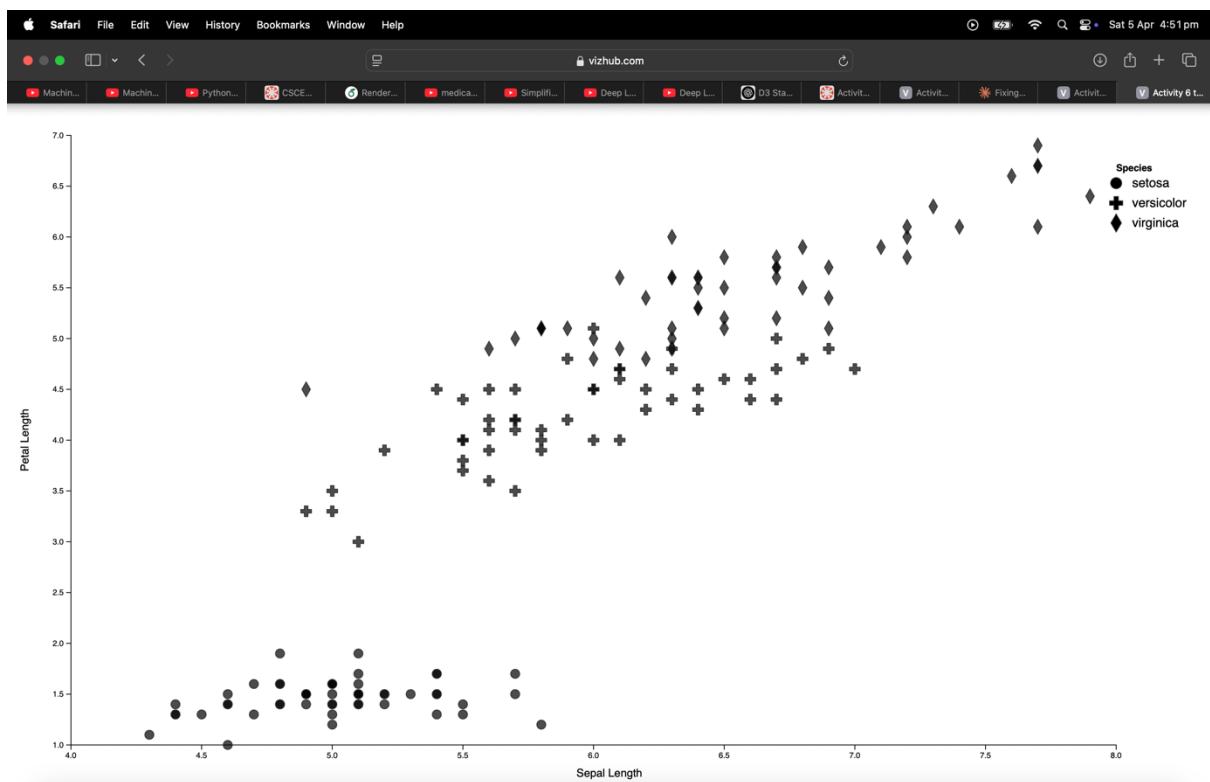
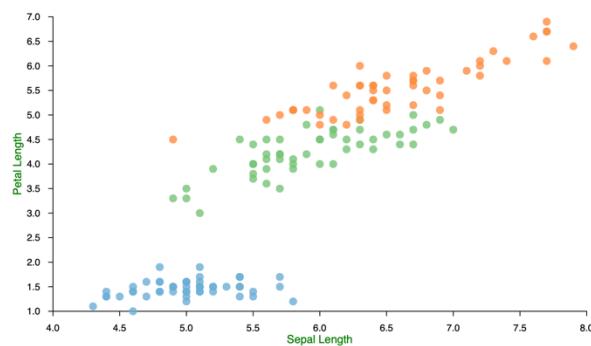
// Shape scale for different species
const shapeScale = d3
    .scaleOrdinal()
    .domain([
        ...new Set(data.map((d) => d.species))
    ])
    .range([
        d3.symbolCircle,
        d3.symbolCross,
        d3.symbolDiamond,
    ]);

// Create axes
createAxes(svg, {
    xScale,
    yScale,
    xLabel: 'Sepal Length',
    yLabel: 'Petal Length'
});

// Create legend
createShapeLegend(svg, {
    shapeScale,
    legendTitle: 'Species',
});
```



Scatter Plot for the Iris Dataset



Task – 3 Question 1 :

Data set link I used : https://raw.githubusercontent.com/Nithishkaranam2002/Activity-6_Datasets/main/studyData.js

Vizhub link : <https://vizhub.com/Nithishkaranam2002/ede601d20a3f409ab021de15f5360ff3>

Data Explanation:

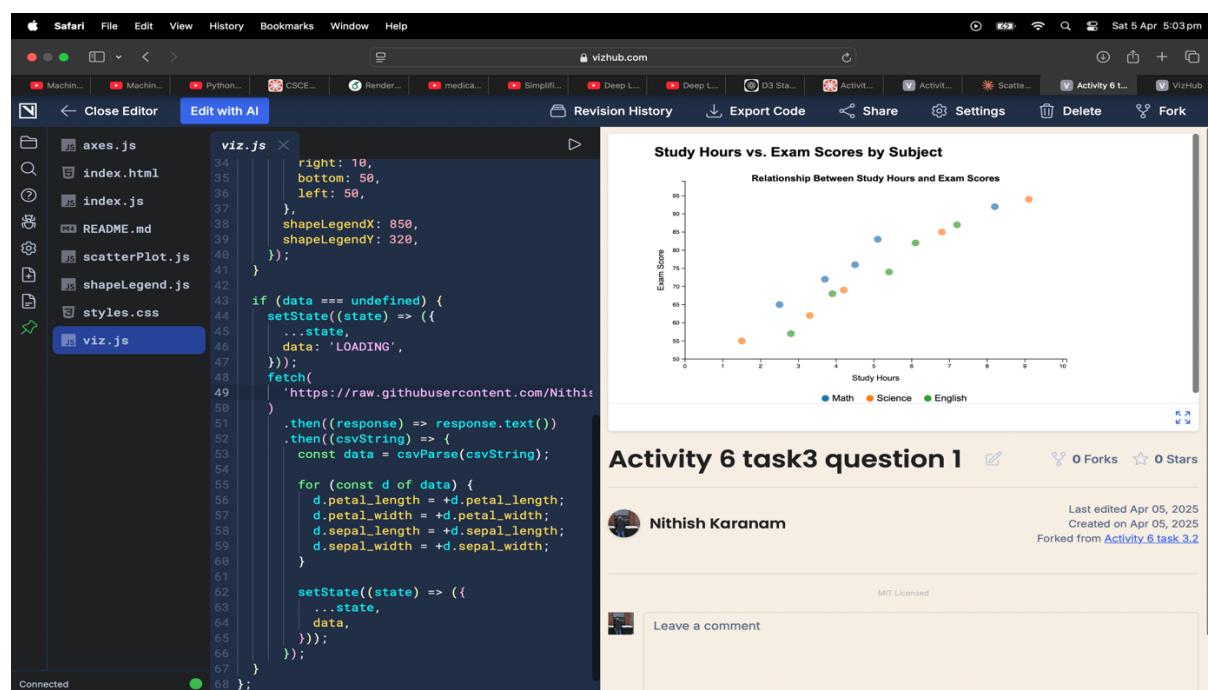
For this project, I created a scatter plot from a data set of study time and scores of three subjects: Math, Science, and English. There are numerous students in the data set, and I am plotting the data point per student as the number of study hours a student spent and the test score he/she achieved in the subject. I used the subject as a third variable so that each point was differentiated by color, as this would make it more convenient visually when viewing trends per subject.

Visualization Summary:

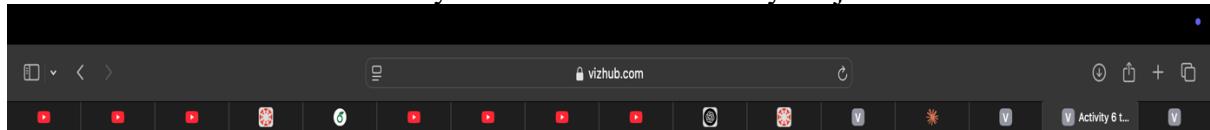
I made the scatter plot with D3.js. The y-axis has study hours, while the x-axis has exam scores. Each of the dots in the plot corresponds to the student. Color represents the subject of the exam: Math by orange, Science by green, English by blue, etc. I've also put in axis labels ("Study Hours" and "Exam Score") and a legend to make the color coding clear. This improved the readability of the chart and kept the data well separated

Chart Analysis:

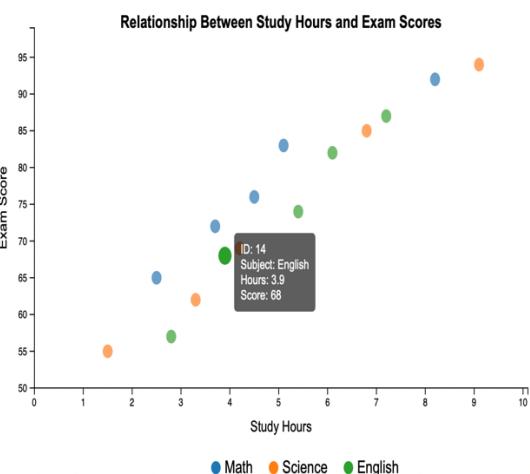
The scatter plot can easily show a direct relationship between study time and exam scores. The students who study more hours are also scoring better in all three subjects. There is a slight difference, though — in Math, for example, they would be scoring slightly lower for the same study hours when contrasted with English. Cross-subject performance trends can easily be contrasted by this visualization and trends such as steady progress through more study time can be identified.



Here is the Visualization of Study Hours vs Exam scores by subject :



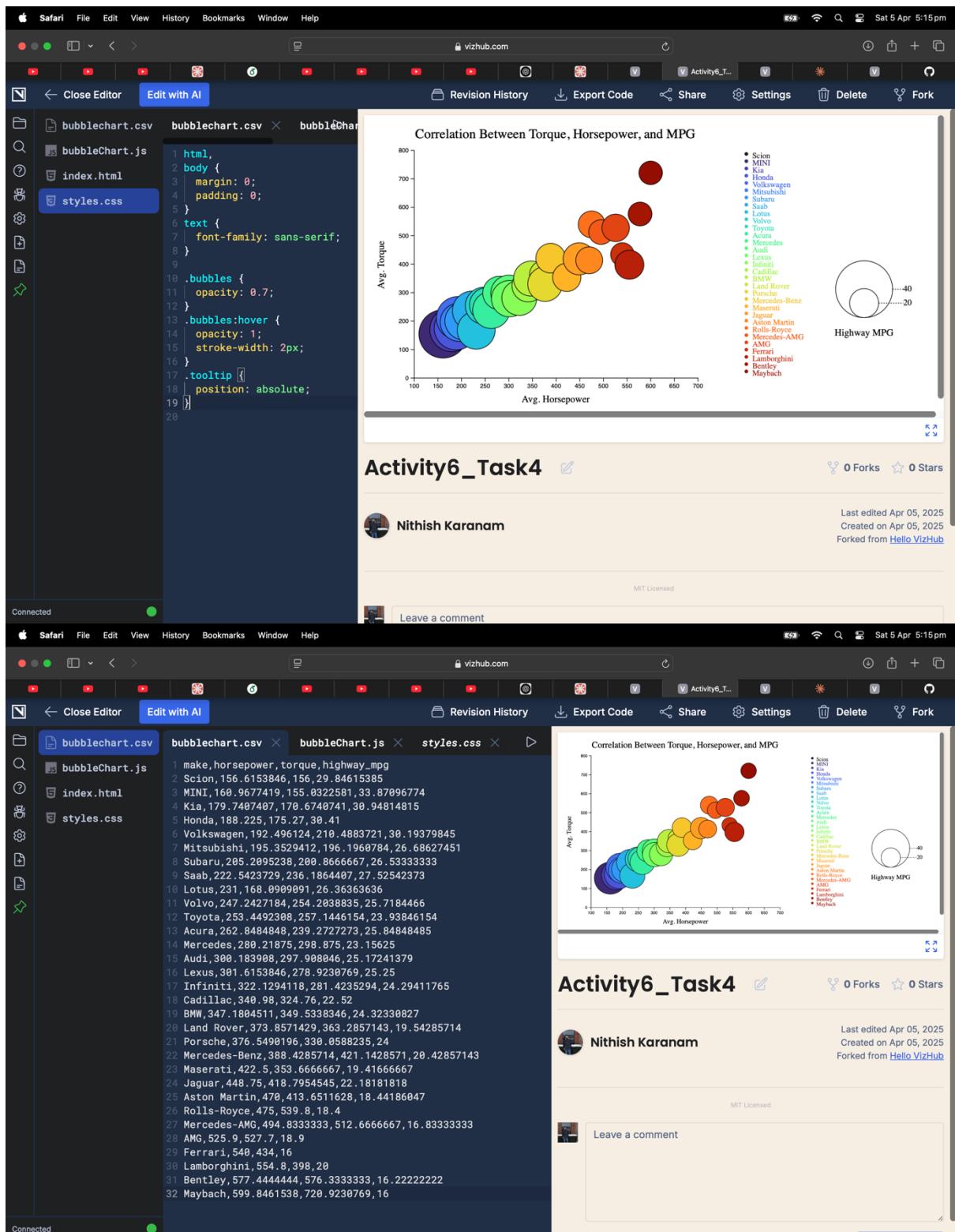
Study Hours vs. Exam Scores by Subject



Task -4 : Bubble Chart:

Link : <https://vizhub.com/Nithishkaranam2002/c45b39f593074f61abbcf7c319a901fa>

This bubble chart shows the relationship between average horsepower, average torque, and highway MPG of different car brands. The size of each bubble represents fuel efficiency, while colors distinguish the car brands



Tak 4 : Question 1:

Vizhub link: <https://vizhub.com/Nithishkaranam2002/3875d6d853cd470e959832e0dc6f0a5c>

Data Description:

For this exercise, I created a bubble chart from a data set of the major tech companies such as Apple, Microsoft, Amazon, Alphabet, and several others.

The data set has three major metrics for each of the companies:

1. Total Annual Revenue in billions of USD

2. Profit Margin (%)

3. Number of Employees (in thousands)

Each dot is a single firm, showing its employment and financial numbers in graphical terms.

Visualization Summary:

I made a bubble chart in D3.js where:

The y-axis is each firm's annual revenue. The y-axis shows the profit margin.

The size of the bubble corresponds with the number of staff members (larger bubbles represent more staff members).

The color of every bubble signifies the firm (a legend is provided).

I also placed proper axis labels, a title, a description of the chart, and a helpful legend explaining the components in the chart. On hover, additional information is revealed regarding the firm details.

Chart Analysis

From this table, we can see: Amazon generates the most revenue and has the biggest workforce but has less profit margin.

Two of the most profitable, though lower-revenue, companies are TSMC and Microsoft. Apple and Alphabet both enjoy strong revenue with strong margins. These two companies earn good revenues but relatively lower margins. This bubble chart is a simple but dynamic way of comparing firms by size of firm versus performance financially. This helps visualize how some firms become highly profitable with more streamlined staff, while firms become highly revenue-driven but with lower margins.

Safari File Edit View History Bookmarks Window Help

vizhub.com Sat 5 Apr 5:40 pm

Tech Companies Analysis

This bubble chart visualizes major technology companies by revenue, profit margin, and employee count.

Tech Companies: Revenue vs Profit Margin vs Employee Count

```

styles.css
padding: 15px;
border-radius: 5px;
margin-top: 20px;
font-size: 14px;

.instruction h3 {
  margin-bottom: 10px;
  color: #2c3e50;
}

.instruction ul {
  margin-left: 20px;
  margin-bottom: 10px;
}

.instruction li {
  margin-bottom: 5px;
}

/* Make sure the visualization is responsive */
@media (max-width: 768px) {
  .container {
    width: 100%;
    padding: 10px;
  }

  h1 {
    font-size: 1.2rem;
  }

  #chart {
    height: 400px;
  }
}

```

Activity6_Task4 question

1

Nithish Karanam Last edited Apr 05, 2025 Created on Apr 05, 2025 Forked from [Activity6_Task4](#)

Leave a comment

Here is the final visualization :

