



Background

Are you living in Illinois and trying to find hospitals in your area and compare their ratings?

Our project allows you to look at the hospitals in your area, their ratings, and the number of staffed beds that each hospital has.

Our Process

Found dataset with enough information about all Illinois Hospitals

Decided on web design and created HTML

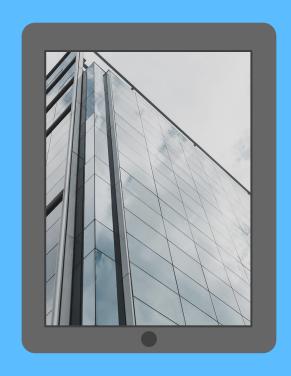


Scraped and cleaned up our dataset and looked for the most useful and interesting information

Used the information to decide on the best visualizations for the user

Technologies Used

- Jupyter Notebook
- PgAdmin
- HTML/Flask
- Javascript
- MapBox
- Python



Why We Chose this Topic?

We chose this topic after having a conversation about healthcare in the US and wanted to zone in specifically in Illinois to help people when choosing the best hospital that would fit their individual needs.

Illinois Hospital Data from AHD

N HOSPITAL DIRECTORY Home FREE Seal	User Name: Password: arch FAQs Sources Updates Order Info Login					
ividual Hospital Statistics fo	care hospitals.			D-6-ini		
Data are based on each hospital's most recer Hospital Name	city	Staffed Beds	Total Discharges	Patient Days	Gross Patient Revenue (\$000)	
Carle Richland Memorial Hospital	Olney	81	1,218	3,954	\$174,055	
Northwestern Medicine Kishwaukee Hospital	DeKalb	98	5,257	22,918	\$1,029,869	
375th Medical Group - Scott Air Force Base Medical Center	Scott Air Force Base	0	0	0	\$(
AdventHealth Bolingbrook	Bolingbrook	134	5,159	21,501	\$663,37	
AdventHealth GlenOaks	Glendale Heights	138	4,636	23,126	\$282,596	
AdventHealth Hinsdale	Hinsdale	261	9,104	43,576	\$865,900	
AdventHealth La Grange	La Grange	177	6,309	28,480	\$582,79	
Advocate Christ Medical Center	Oak Lawn	782	38,806	219,199	\$3,683,009	

https://www.ahd.com/states/hospital IL.html

Scraped & Cleaned Data

BeautifulSoup → Pandas DataFrame → CSV

Hospital Name	City	StaffedBeds	TotalDischarges	PatientDays	Gross PatientRevenue (\$000)
Carle Richland Memorial Hospital	Olney	81	1218	3954	174055
Northwestern Medicine Kishwaukee Hospital	DeKalb	98	5257	22918	1029869
AdventHealth Bolingbrook	Bolingbrook	134	5159	21501	663377
AdventHealth GlenOaks	Glendale Heights	138	4636	23126	282596
AdventHealth Hinsdale	Hinsdale	261	9104	43576	865900
AdventHealth La Grange	La Grange	177	6309	28480	582797
Advocate Christ Medical Center	Oak Lawn	782	38806	219199	3683005
Advocate Condell Medical Center	Libertyville	273	14177	71353	1415880
Advocate Good Samaritan Hospital	Downers Grove	288	15249	68733	1162077
Advocate Good Shepherd Hospital	Barrington	176	10039	39271	860020
Advocate Illinois Masonic Medical Center	Chicago	292	11677	52130	1827175

Hospital Review & Coordinates from Google

Manually collected from google

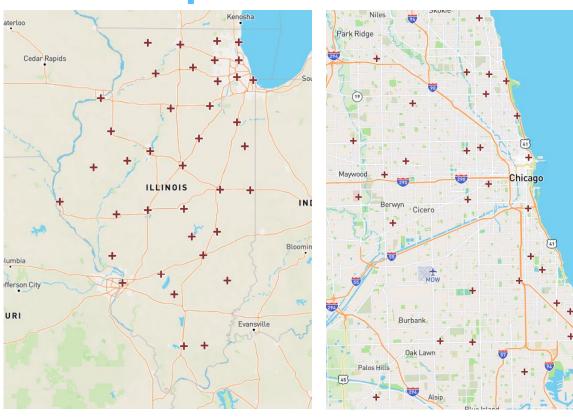
hospital_name	city	latitude	longitude	google_stars
Carle Richland Memorial Hospital	Olney	38.735037	-88.077077	3.1
Northwestern Medicine Kishwaukee Hospital	DeKalb	41.929474	-88.750365	2.4
AdventHealth Bolingbrook	Bolingbrook	41.680731	-88.083622	2.5
AdventHealth GlenOaks	Glendale Heights	41.914654	-88.057238	2.7
AdventHealth Hinsdale	Hinsdale	41.805609	-87.920693	3.2
AdventHealth La Grange	La Grange	41.796662	-87.886265	3
Advocate Christ Medical Center	Oak Lawn	41.721989	-87.732829	3.4
Advocate Condell Medical Center	Libertyville	42.274473	-87.957637	2.6

Final Dataset

Merge Pandas DataFrames → Cleaning & Formatting → Postgres Database (pgAdmin)

hospital_name	city	staffedbeds	totaldischarges	patientdays	gross_patientrevenue_usd	latitude	longitude	google_stars
AdventHealth Bolingbrook	Bolingbrook	134	5159	21501	663377	41.680731	-88.083622	2.5
AdventHealth GlenOaks	Glendale Heights	138	4636	23126	282596	41.914654	-88.057238	2.7
AdventHealth Hinsdale	Hinsdale	261	9104	43576	865900	41.805609	-87.920693	3.2
AdventHealth La Grange	La Grange	177	6309	28480	582797	41.796662	-87.886265	3.0
Advocate Christ Medical Center	Oak Lawn	782	38806	219199	3683005	41.721989	-87.732829	3.4
Advocate Condell Medical Center	Libertyville	273	14177	71353	1415880	42.274473	-87.957637	2.6
Advocate Good Samaritan Hospital	Downers Grove	288	15249	68733	1162077	41.817932	-88.009037	2.9
Advocate Good Shepherd Hospital	Barrington	176	10039	39271	860020	42.152293	-88.131016	3.1
Advocate Illinois Masonic Medical Center	Chicago	292	11677	52130	1827175	41.936758	-87.651264	3.1
Advocate Lutheran General Hospital	Park Ridge	643	26642	148612	2514649	42.038367	-87.848199	3.0
Advocate Sherman Hospital	Elgin	255	18591	54775	1287999	42.069926	-88.331159	2.9
Advocate South Suburban Hospital	Hazel Crest	233	9679	44688	820081	41.566094	-87.694652	2.5

Map visualization



Carle Richland Memorial Hospital Northwestern Medicine Kishwaukee Hospital AdventHealth Bolingbrook AdventHealth GlenOaks AdventHealth Hins dale AdventHealth La Grange Advocate Christ Medical Center Advocate Condell Medical Center Advocate Good Shepherd Hospital Advocate Illinois Masonic Medical Center Advocate Lutheran General Hospital Advocate Sherman Hospital Advocate South Suburban Hospital Advocate Trinity Hospital Alton Mei Anderson Hospital As cension Alexian Brothers in Elk Grove Village As cension Mercy in Aurora Ascension Resurrection in Chicago Ascension Saint Elizabeth in Chicago Ascension Saint Francis in Evanston As cension Saint Joseph - Elgin As cension Saint Joseph -Chicago As cension Saint Joseph-Jollet As cension Saint Mary -Chicago As cension St. Alexius in Hoffman Estates As cension St. Mary- Kankakee Blessing Hospital Cancer Treatment Centers of America Chicago Carle BroMenn Medical Center Carle Foundation Hospital CGH Medical Center Community First Medical Center Crossroads Community Hospital Decatur Memorial Hospital Edward Hospital - Main Campus Elmhurst Hospital Evanston Hospital FHN Memorial Hospital Franciscan Health Olympia Fields Campus Gateway Regional Medical Center Genesis Medical Center Graham Hospital Harrisburg Medical Center Heartland Regional Medical Center Herrin Hospital Holy Cross Hospital HSHS Good Shepherd Hospital HSHS Saint Joseph's Hospital Breese SHS Saint Mary's Hospital Humbolt Park Health INSIGHT Hospital and Medical Center Chicago Iroquois Memorial Hospital Jackson Park Hospital Jacksonville Memorial Hospital Javon Bea Hospital - Rockton Jersey Community Hospital John H. Stroger, Jr. Hospital of Cook County Saint Anthony's Memorial Hospital Saint Elizabeth's Hospital Saint John's Hospital Holy Family Ho Good Samarltan Hospital ortal Ho spital Staffed Beds by Hospital, K-Z

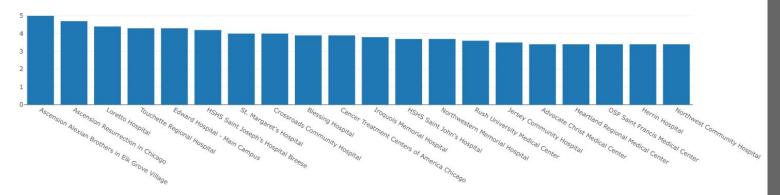
> OSF Saint Elizabeth Medical Center OSF Saint Francis Medical Center OSF Saint James-John W. Albrecht Medical Cent OSF Saint Joseph Medical Center OSF Saint Mary Medical Center Provident Hospital of Cook County Riverside Medical Center Rush Oak Park Hospital Rush University Medical Center Rush-Copley Medical Center Saint Anthony Hospital Saint Margaret's Health-Spring Valley
> Saint Bernard Hospital and Health Care Center Sarah Bush Lincoln Health Center Silver Cross Hospital Skokle Hospital South Shore Hospital Springfield Memorial Hospital SSM Health Good Samarltan Hospital - Mount Ve SSM Health Saint Mary's Hospital-Centralia Swedish Hospital SwedishAmerican Hospital The New Roseland Community Hospital Thorek Memorial Hospital Thorek Memorial Hospital Andersonville Touchette Regional Hospital Trinity Rock Island UChicago Medicine Ingalis Memorial UnityPoint Health - Methodist Unity Point Health - Pekin University of Illinois Medical Center Welss Memorial Hospital West Suburban Medical Center UChicago Medicine . Margaret's Hospital

800 600 400 200 Katherine Shaw Bethea Hospital Lake Behavioral Hospital Loretto Hospital Loyola Gottlieb Memorial Hospital Loyola University Medical Center MacNeal Hospital McDonough District Hospital Memorial Hospital Belleville Memorial Hospital East Memorial Hospital of Carbondale Morris Hospital Mount Sinal Hospital Northwest Community Hospital Northwestern Medicine Central DuPage Hospital

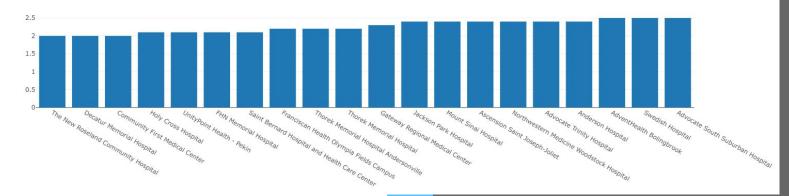
Northwestern Medicine Delnor Hospital Northwestern Medicine Lake Forest Hospital Northwestern Medicine McHenry Hospital Northwestern Medicine Palos Hospital Northwestern Medicine Woodstock Hospital Northwestern Memorial Hospital OSF Heart of Mary Medical Center OSF LIttle Company of Mary Medical OSF Sacred Heart Medical Center OSF Saint Anthony Medical Center OSF Saint Anthony's Health Center

Center

Top 20 Hospitals - Google Stars

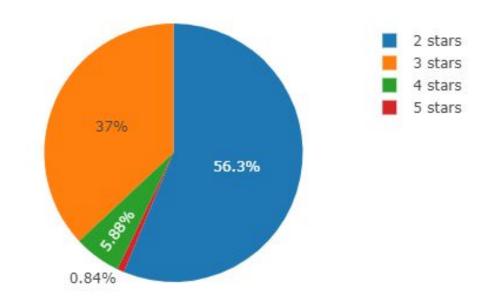


Google Stars - Bottom 20 Hospitals



Distribution of Reviews by Number of Stars

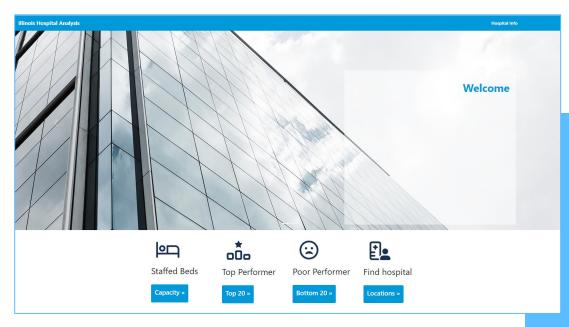
Is low patient satisfaction in our dataset indicative of broader trends about American healthcare?



Web Page Design

HTML → Rendering data with Flask

- Use Bootstrap v5.0 Carousel Template
- Modify HTML elements including:
 - Texts
 - Tables
 - Images
 - o URLs
- Create a Flask application
- Render a static HTML template with Flask



Demo of App



Changes we would make/difficulties we had

Difficulties

- Getting web image to be responsive to our laptop size
- Only allowed to access data site a certain amount of times
- Scraping the star reviews of each hospital
- Accessible from USA only

Changes

- Choosing a more broad topic to be able to find more data
- Using a more openly available data set
- Manually collected data from google

Questions?

CREDITS: This presentation template was created by Slidesgo, including icons by Flaticon, and infographics & images by Freepik.

