

# Hospital Emergency Room Dashboard – Project Documentation

Prepared by: Neha Raikwar | Role: MIS / Data Analyst

## 1. Project Objective

The objective of this project was to design an interactive Excel dashboard to monitor emergency room operations and support data-driven decision-making.

## 2. Tools & Technologies Used

- Microsoft Excel
- Power Query for data cleaning and transformation
- Pivot Tables for aggregation
- Pivot Charts & Slicers for interactivity

## 3. Data Understanding

Reviewed raw emergency room data including patient demographics, admission details, department referrals, wait time, and satisfaction scores.

## 4. Data Cleaning & Preparation

Used Power Query to remove duplicates, handle missing values, standardize gender fields, correct data types, and create calculated fields such as age groups.

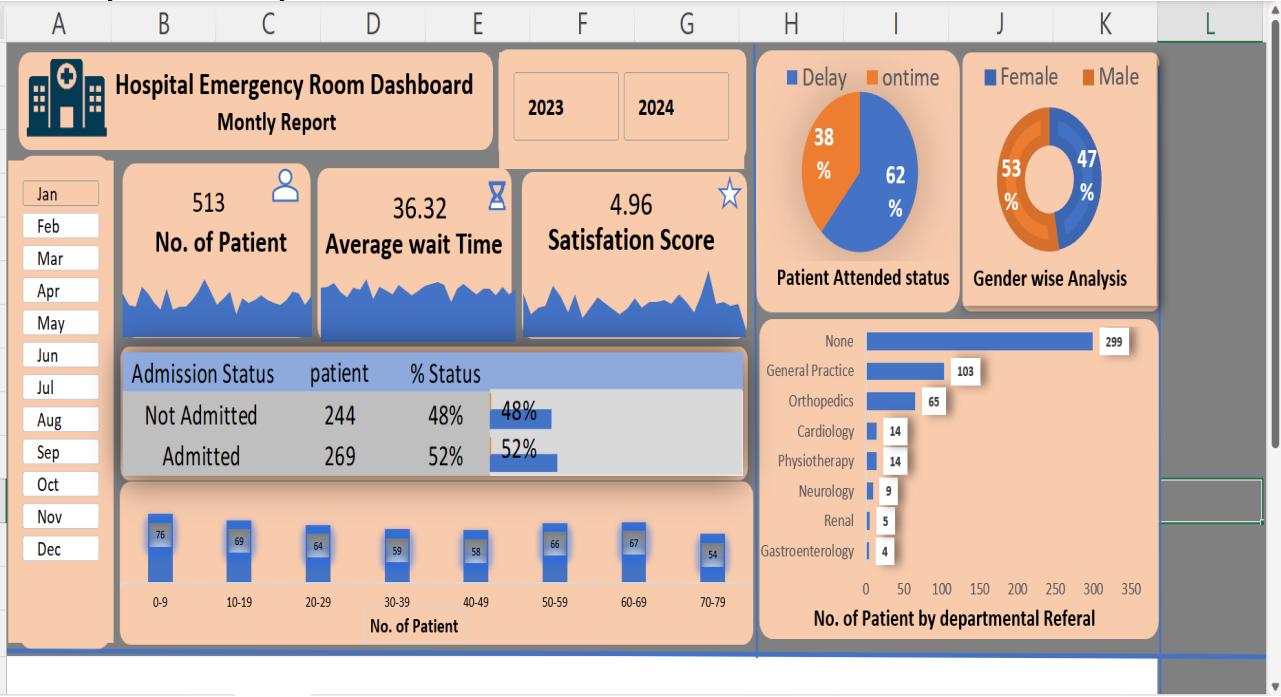
## 5. Raw Data & Pivot Table Creation

Patient Id	Patient Admission Date	Patient First Initial	Patient Last Name	Patient Gender	Patient Age	Patient Race	Department Referral	Patient Admission Flag	Patient Satisfaction Score	Patient Waittime	Patient Admission Flag
145-39-5406	20-03-2024 08:47	H	Glasspool	M	69	White	None	FALSE	10	39	FALSE
316-34-3057	15-06-2024 11:29	X	Methuen	M	4	Native American/Alaska Native	None	TRUE		27	TRUE
897-46-3852	20-06-2024 09:13	P	Schubuser	F	56	African American	General Practice	TRUE	9	55	TRUE
358-31-9711	04-02-2024 22:34	U	Titcombe	F	24	Native American/Alaska Native	General Practice	TRUE	8	31	TRUE
289-26-0537	04-09-2024 17:48	Y	Gionettitti	Male	5	African American	Orthopedics	FALSE		10	FALSE
255-51-2877	20-04-2023 00:13	H	Buff	M	58	Asian	None	FALSE		59	FALSE
465-97-0990	23-08-2023 08:26	F	Perrat	F	68	White	None	TRUE		43	TRUE
157-31-7520	29-07-2023 16:57	K	Gwillim	F	47	Two or More Races	None	TRUE		23	TRUE
432-34-5614	19-02-2024 06:54	E	Dewhirst	F	79	White	None	FALSE	1	42	FALSE
609-17-8678	11-10-2024 05:25	M	Crebo	Male	62	African American	None	FALSE		51	FALSE
497-14-6812	26-07-2024 01:45	Q	Churchard	F	73	White	Gastroenterology	TRUE		34	TRUE
393-38-9502	10-03-2024 22:02	N	Corpes	F	16	White	Orthopedics	FALSE		39	FALSE
288-05-6370	12-11-2023 16:00	R	Brixy	F	16	Native American/Alaska Native	General Practice	TRUE		53	TRUE
784-54-9931	25-06-2023 09:40	M	Goudie	M	46	Pacific Islander	None	FALSE		45	FALSE
662-21-6522	04-05-2023 13:16	G	Stanlack	Male	69	White	None	TRUE		49	TRUE
628-73-1801	19-09-2023 01:53	C	McMurty	M	37	Declined to Identify	None	TRUE		57	TRUE
370-19-2271	25-05-2024 22:11	I	Scothorn	F	50	Asian	General Practice	FALSE		35	FALSE
458-98-8860	25-06-2023 18:59	J	Helgass	M	37	Declined to Identify	None	FALSE		55	FALSE
728-31-2493	04-09-2023 16:15	W	Chittock	F	70	Asian	Physiotherapy	TRUE		50	TRUE
823-34-5523	16-11-2023 23:46	F	Prendergast	M	55	Asian	None	TRUE	2	40	TRUE
621-70-7472	30-06-2023 05:22	T	Bissiker	F	63	Native American/Alaska Native	None	TRUE		25	TRUE
344-36-7156	22-05-2023 16:48	M	Mandell	F	44	Asian	None	FALSE	2	51	FALSE
455-21-3671	17-11-2023 07:24	D	Coste	Female	11	Declined to Identify	None	FALSE	4	30	FALSE
259-10-0339	26-01-2024 05:58	Q	Dodridge	M	8	Asian	General Practice	FALSE		16	FALSE
720-54-2625	24-05-2023 14:42	C	Pavie	F	4	Native American/Alaska Native	None	TRUE		23	TRUE
661-92-7059	12-04-2023 21:02	Z	Sleightholm	M	42	African American	None	FALSE	0	51	FALSE
598-53-3927	04-09-2024 02:30	S	Noads	F	68	African American	None	FALSE		58	FALSE
715-74-5338	16-12-2023 13:02	J	Filkin	M	22	Pacific Islander	General Practice	FALSE		25	FALSE
659-34-3146	11-03-2024 17:06	G	Bliss	F	69	Declined to Identify	None	FALSE		55	FALSE

No. of patient					Daily T
Distinct Count of Patient Id					Row La
513					1-Jan
Average of Patient Waittime					2-Jan
36.32					3-Jan
Average of Patient Waittime					4-Jan
36.32					5-Jan
					6-Jan
Average of Patient Satisfaction Score					7-Jan
4.96					8-Jan
Admission Status					9-Jan
Row Labels	Count of f	Count of Patient Admission Flag2			10-Jan
Admitted	269.00	52%			11-Jan
Not Admitted	244.00	48%			12-Jan
Grand Total	513.00	100.00%			13-Jan
Attended Status					14-Jan
Row Labels	Count of Patient Attend Status				15-Jan
Delay	316				16-Jan
ontime	197				17-Jan
Grand Total	513				18-Jan
Gender Wise Analysis					19-Jan
					20-Jan
					21-Jan
					22-Jan
					23-Jan
					24-Jan
					25-Jan
					26-Jan
					27-Jan
					28-Jan

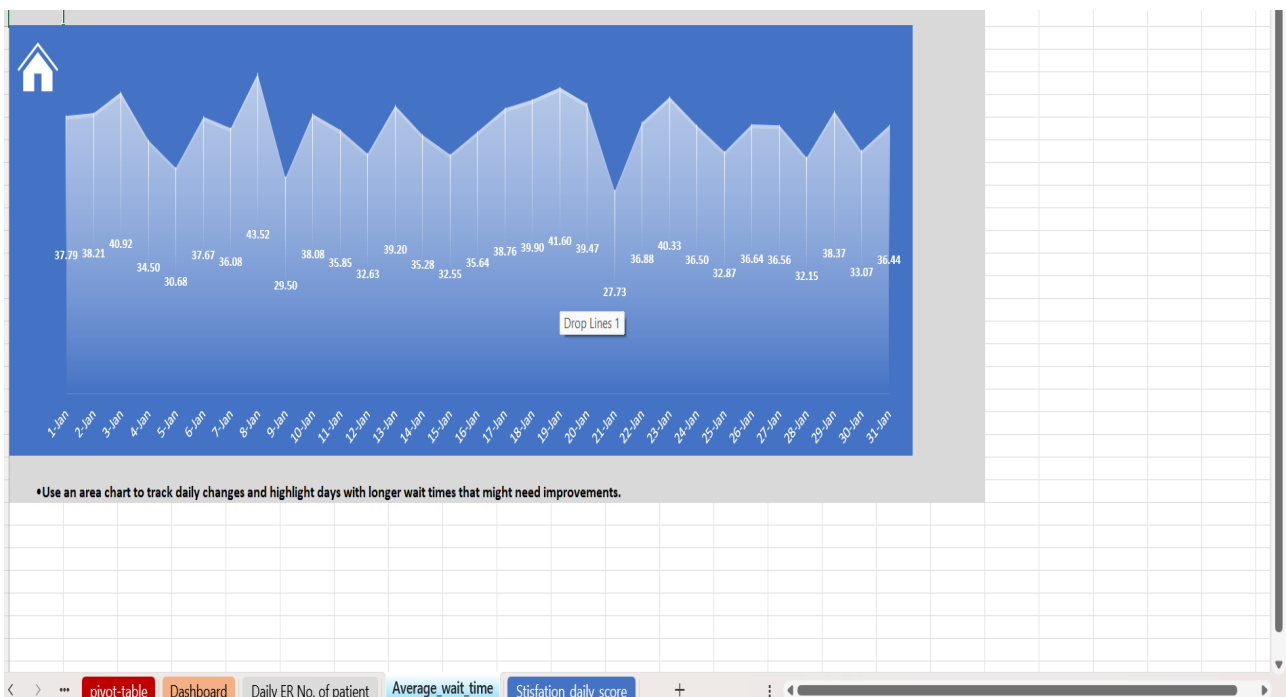
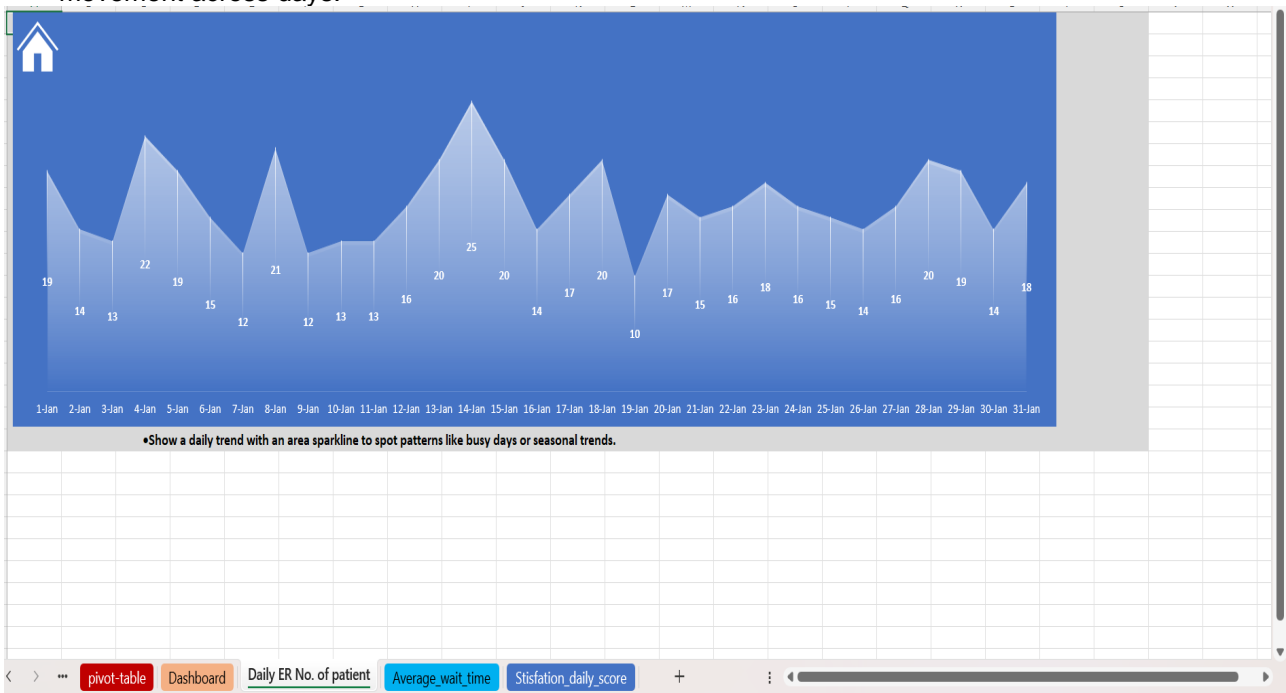
## 6. Dashboard Design

Designed a structured dashboard layout with KPI cards, charts, and slicers to enable month-wise and year-wise analysis.

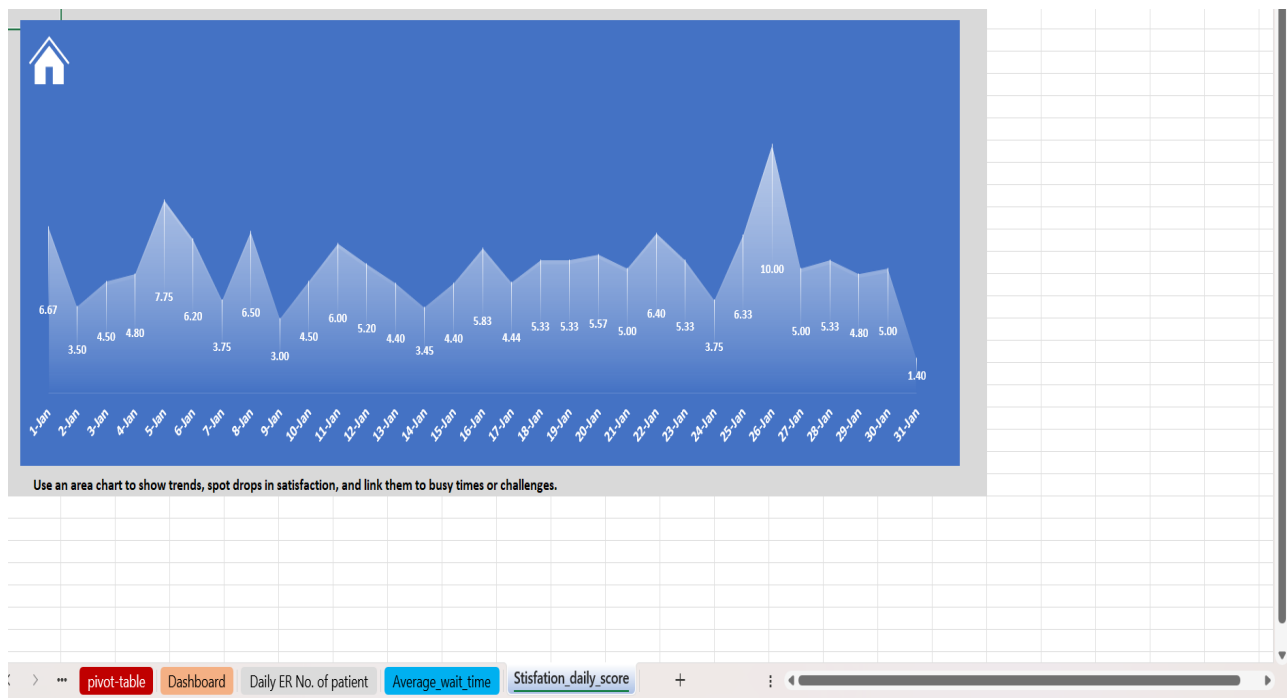


## 7. Trend Analysis Visuals

Created area charts to visualize daily patient count, average wait time trends, and satisfaction score movement across days.



## 8. Satisfaction Trend Visualization



## 9. Conclusion

This documentation highlights the end-to-end process followed to clean data, build pivot-based analysis, and design an interactive Excel dashboard, demonstrating practical MIS and data analysis skills.