Turning Data into Actionable, Understandable, & Cheerful Insights

Hend Abd El-Ghafour

Data Analyst

Elevate your Business with Analysis

Hello, I'm Hend. Working as an accountant & dealing with numbers made me realize my passion for gathering & analyzing data to understand my surroundings & extract insights that satisfy my curiosity.

Over the past four years, I have developed strong skills in data analysis, strengthening my technical proficiency & fueling my drive to extract understandable, actionable insights that meet high-quality standards using Python, SQL, Tableau, Power BI & Excel.

With a detail-oriented, perfection-driven, & analytical mindset—as well as a creative edge—I can deliver visually compelling & efficient insights that align with your quality standards.
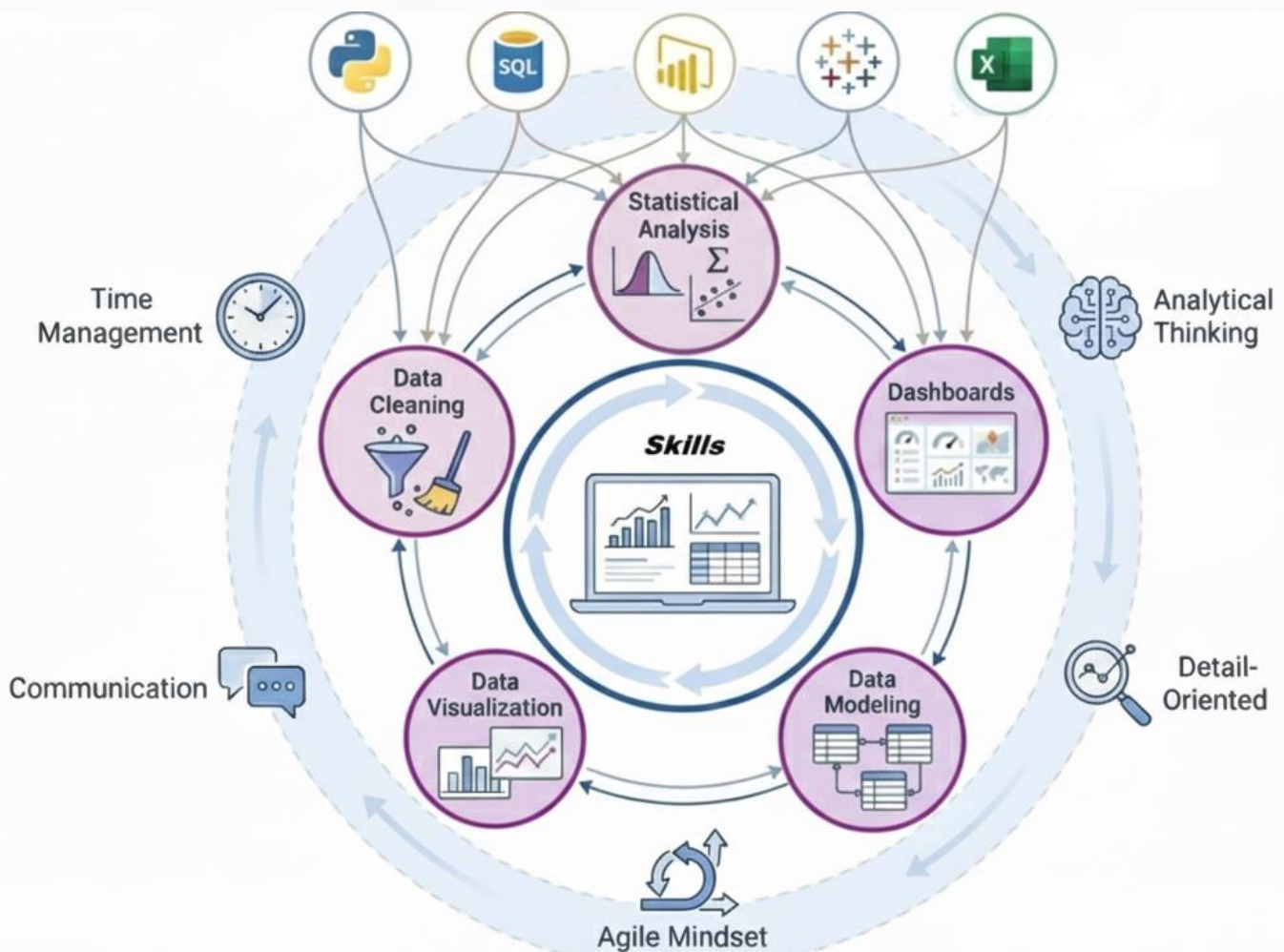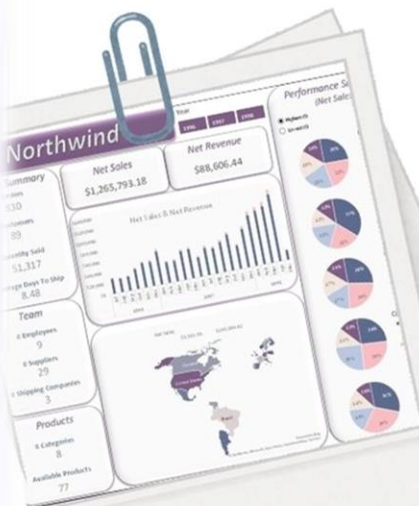
By hiring me, you gain a dedicated professional with a strong analytical skill set, a keen eye for detail, & a commitment to delivering actionable insights & efficient solutions tailored to your business needs.

- Understand business context and prepare reliable datasets using SQL, Excel, Python, and BI Tools.

- Clean and standardize missing values, duplicates, and inconsistencies with strong attention to detail.

- Validate data logic and relationships through careful review & critical thinking.

- Ensure accuracy & accountability to support trustworthy analysis & decisions.

- Explore data to identify trends, patterns, & performance drivers using structured analytical thinking.

- Break complex problems into clear, testable questions with curiosity & persistence.

- Apply comparisons, segmentation, & reasoning to explain business behavior.

- Translate findings into clear, logical conclusions with confidence & responsibility.

Data Understanding & Preparation

Analytical Thinking &Problem Solving

Decision Support & Collaboration

Visualization & Storytelling

- Provide practical, data-driven recommendations aligned with business goals.

- Document insights clearly to ensure transparency & trust.

- Adapt analysis based on feedback with flexibility & openness.

- Collaborate effectively with stakeholders to support informed decisions.

- Build clear, user-focused dashboards in Tableau, Power BI, & Excel with strong visual judgment.

- Select charts based on message & audience, not appearance.

- Organize insights into a logical flow that supports understanding & action.

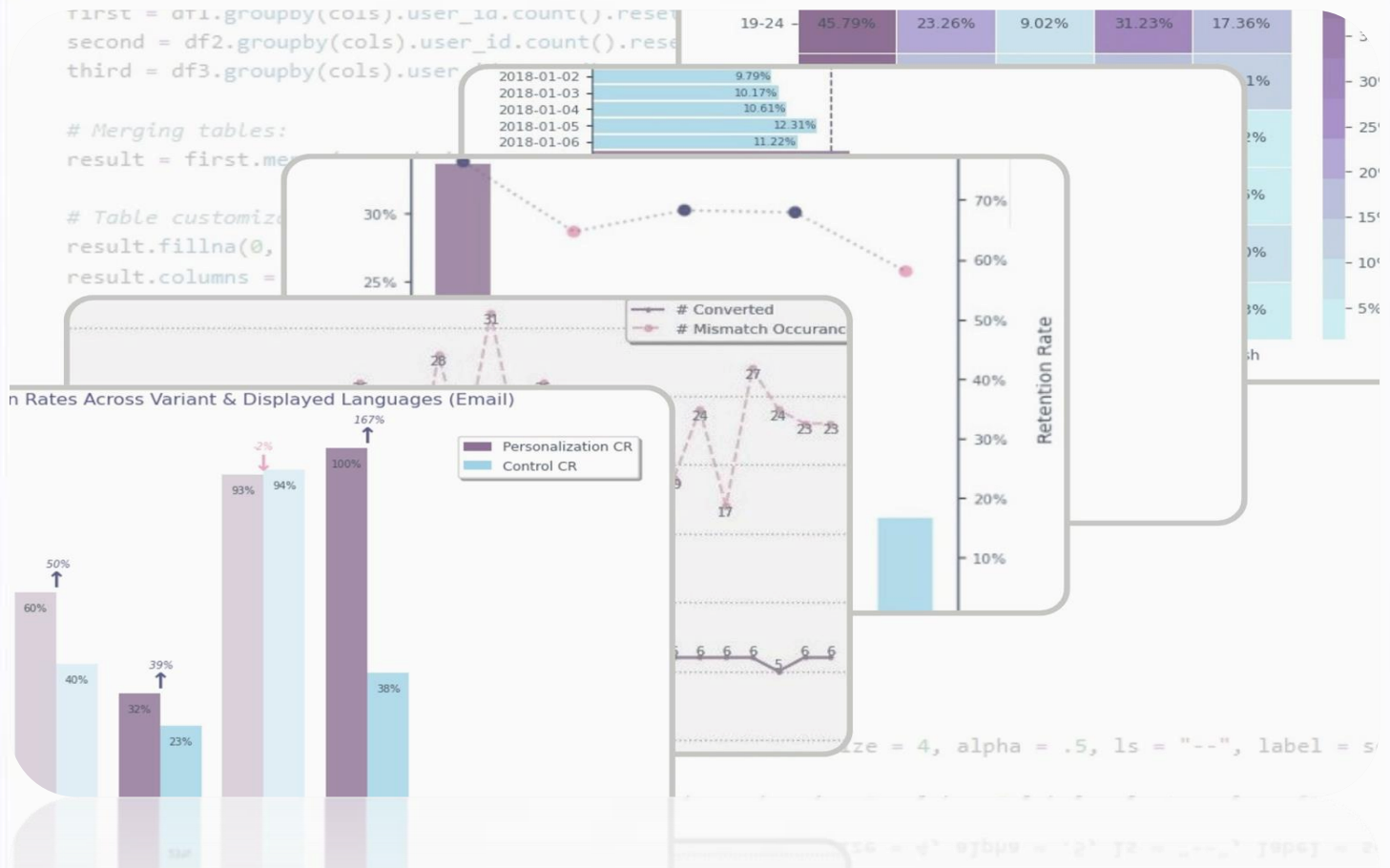- Communicate results in a simple, honest, & engaging way.

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Analyzing Marketing Campaigns

Python

➢ Analyzed *7K* users across multi-channel ad exposures & subscription behavior during *Jan 2018*.

➢ Detected Duplicate & near-duplicate records, missing values, user-level inconsistencies, & technical bug in House Ads.

➢ Users under 30 had a higher average conversion rate ≈ *19.29%* compared to *7.29%* achieved by users above 30.

➢ *22.93%* of users saw the ad multiple times leading a conversion rate ≈ *17.83%* & retention rate around *70.19%* compared to *11.58%* & *64.01%* for the ones who saw the Ad once.

➢ Detected House Ads failure after *Jan-10* causing ~**26 lost subscribers**.

➢ A/B test showed *+38.85%* **uplift** in email personalization *(p ≈ 0.65%)*

Recommendations:
- *budget shift toward **Email, Instagram,** & **Facebook**.*
- *Fix the language-serving bug immediately.*
- *Adopt **multi-touch** exposure strategy*
- *Improve tracking infrastructure to prevent duplicate conversions & inconsistent logs.*
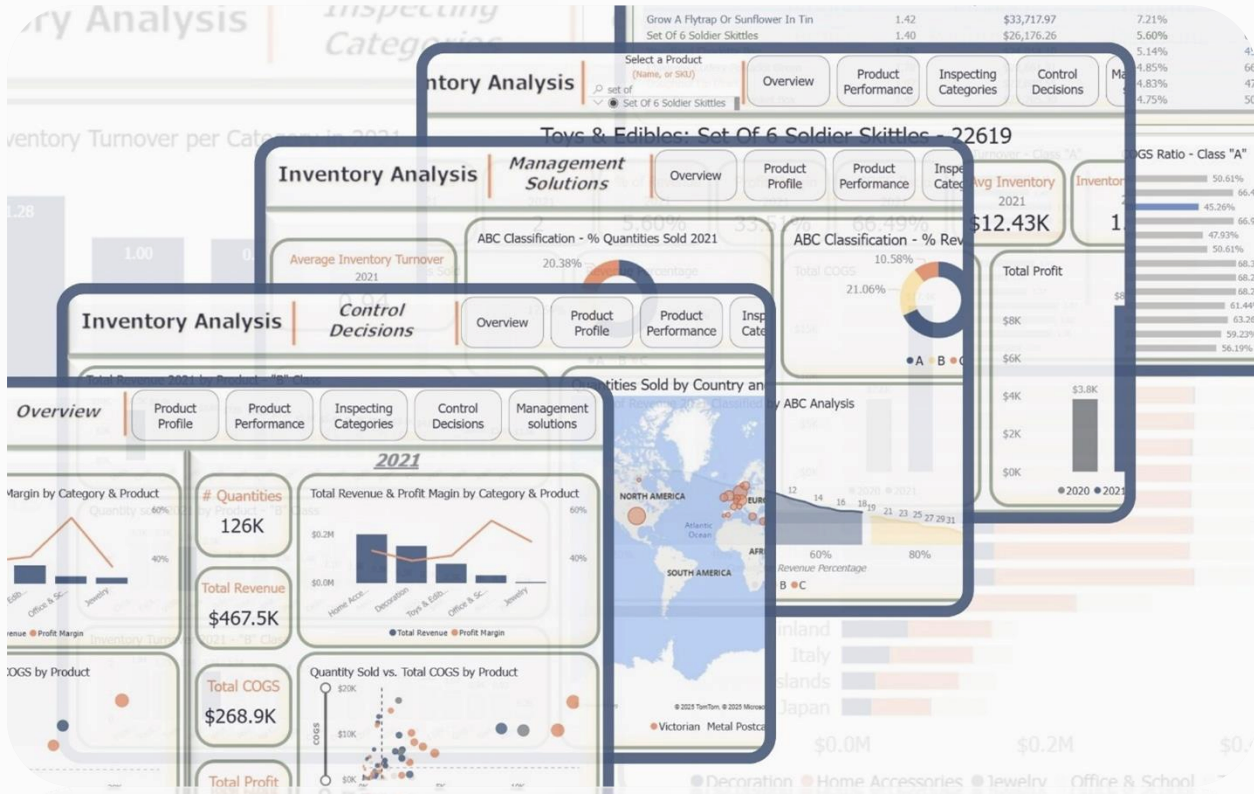
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Inventory Analysis – *WarmeHands Inc. (2021 vs 2020)* ⬈

Power BI

➢ Analyzed inventory performance for *2021 vs 2020* using turnover & average inventory value.

➢ Applied *ABC Analysis* to rank products by revenue impact.

➢ Set of 6 Soldiers Skittles generated *$8.78K* profit on just *2.3K* Q sold.
(Highly profitable despite low volume.)

➢ *3 "A"* items had similar turnover rates, showing consistent dem&.

➢ Jewelry category: *100% C-class* products → *weak* profitability.
(Category needs reevaluation.)

➢ Victorian Metal Post Card "B" had *high* turnover despite *small* revenue.
(Dem& exists but stock is limited.)

➢ *A & B* classes had a similar num. of products, but *A* items dominate revenue due to stock scale.
(A = 70% revenue coverage, & B = 20% coverage).

Recommendations

• *Prioritize A class products with low COGS ratios to maximize profitability.*
• *Increase inventory of promising B class items, to capture unmet dem&.*
• *Reconsider or downscale the Jewelry category, as all products fall into C class with poor returns.*
• *Combine ABC Analysis with turnover insights, since high-dem& items can exist outside A class.*
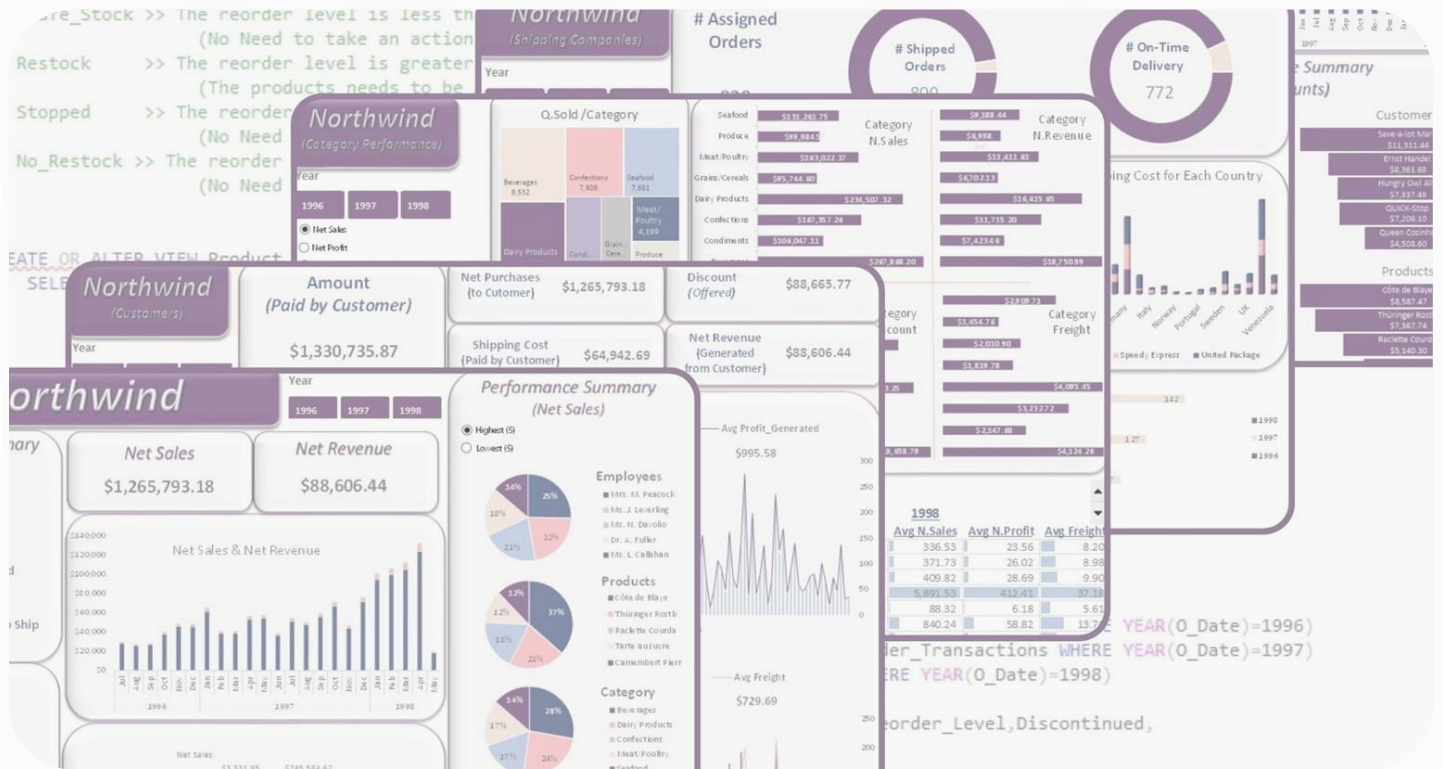
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Northwind

SQL, Python, & Excel

➢ Analyzed *830* orders, *89* customers, & *51,317* units sold across *1996–1998* with adjusted *YoY* comparisons.

➢ Managed inconsistencies in order quantities & stock levels, & standardized date data types.

➢ Analyzed growth across inconsistent time periods to derive accurate trends.

➢ *89.87%* of products active; *23.35%* required restocking.

➢ Beverages led all categories with net sales ≈ *$268K*, net revenue ≈ *$19K*, discounts ≈ *$19K,* & freight ≈ *$4K* in freight for the Whole period.

➢ Top Countries by Sales: USA *(1996≈ $35K, 1998 ≈$93K)*, Germany *(1997: $117K)*.

➢ USA had the most customers *(13)*, & highest *discounts (≈ $17.98K)* & net sales *(≈ $245.58K)*.

Recommendations

• *Use reorder level & stock status data to streamline restocking processes.*

• *Increase on-time deliveries by selecting shipping companies based on past performance.*

• *Focus on high-growth markets, like the USA, & monitor purchasing trends for customer retention & acquisition strategies.*

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Human Resources Dashboard

Tableau

➤ Analyzed *8,950* employees (*7,984* active | *966* terminated) across *7* departments & *8* locations (NY is HQ) from *2015* to *2024*.

➤ Designed clear, purpose-driven visualizations & an employee detail table.

➤ Performed statistical analysis on hiring, terminations, & salaries

➤ Hiring & terminations: *positive correlation*, strongest in Operations *(30% for both).*

➤ termination rates were balanced at *11%* for both males & females.

➤ high school graduates often needed improvement *(34%)*, while *(48%)* of PhD holders were rated excellent.

➤ Managers earned more overall, with role-based exceptions.
   HR Manager considerably low ≈$82K

➤ salary might be determined more by age & experience than by position.

Recommendations

- *Investigate turnover causes by role & department.*
- *Review salary equity across education & gender.*
- *Align performance ratings more closely with retention & compensation.*

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No Show Appointments
Python

➤ Examined a dataset of *100K* medical appointments in Brazil, determining factors impacting attendance.

➤ Cleaned & visualized data to show that longer wait times & lack of reminders contributed to no-shows.

➤ Demonstrated that confirmation messages increased attendance by over *10%*.

➤ Patients are more likely to attend appointments with shorter scheduling gaps.
Attendance Rates → same-day =95.34%, narrow-gap= 77%, moderate-gap= 71.46%, & long-gap = 67.29%.

Recommendation
• *Implement **automated SMS or phone reminders** to improve attendance rates, especially for moderate to long-gap appointments.*
• *Focus on offering **same-day or short-gap** appointment slots to increase attendance.*
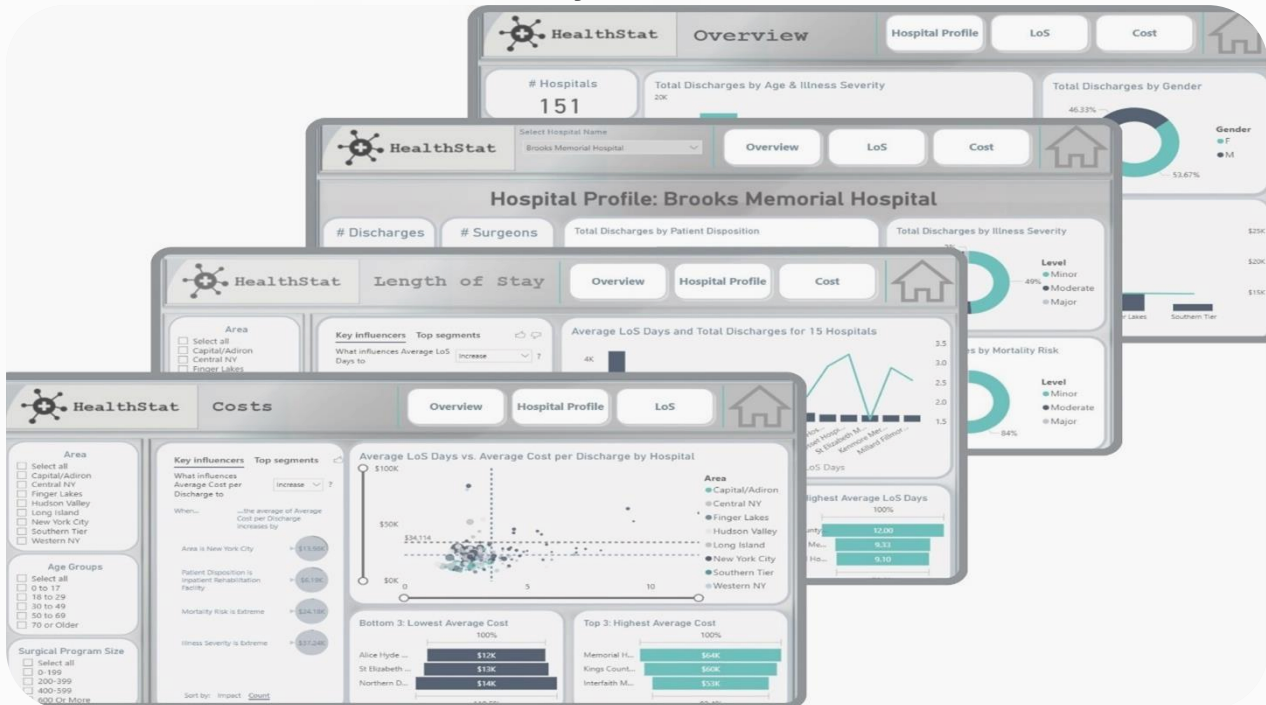
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HealthStat

Python

➢ Analyzed elective hip replacement cases across 151 NY hospitals to identify key drivers of Length of Stay & treatment cost.

➢ 26K hip replacement surgeries conducted by 627 surgeons with an average cost ≈ $21K & Average LOS ≈ 2.65 days.

➢ Found that patients aged over 50 constituted the majority, with illness severity ranging from minor to moderate.

➢ NYC recorded the largest number of hospitals (44), with the highest average cost of $25.5K. Also, Long Island had the second highest average cost ($25.4K) despite ranking third in hospital count

➢ Applied root cause analysis to uncover the main factors influencing both LOS & cost.

Influence Factor	Length of Stay (LoS)	Cost
Extreme Illness Severity	↑9.02 days	↑$37.24K
Extreme Mortality Risk	↑6.11 days	↑$24.18K
NYC hospitals	↑1.51 days	↑$13.98K
Fracture of Neck of Femur (Hip) Diagnosis	↑ 1.77 days	

<u>*Recommendation*</u>

- *Hospitals, particularly in NYC, should explore process optimization strategies for patients with extreme illness severity or mortality risk.*
- *Establish regional benchmarks for cost & LOS, with Long Island requiring closer evaluation due to disproportionately high costs.*

It was a pleasure to go through your code. I'll also suggest using the documentation you created to showcase this work since it is a great project you achieved here. Perhaps you could even try to blog about what you've learned. Keep up the good work! ☺ 👍

Udacity Team

So proud of you & your captivating analysis. I hope you enjoyed the journey as much I enjoyed reviewing your project. ✋ The visualizations are neat; you followed the correct steps in documenting the cleaning process & draw an accurate conclusion. Keep the great work.

Udacity Team

Highlights

Hend has demonstrated commendable dedication & enthusiasm for the course. Her consistent performance, active engagement, & eagerness to learn make her a standout student. I look forward to seeing her continue to excel in future endeavors.

Mayar Ayman - DEPI

I wanted to express my utmost gratitude for all the consistency you have done so far, & your analytical skills will drive you to move forward to the right direction. ☺

Udacity Team

Courses & Certificates

- Associate Data Analyst – *DataCamp*
- SQL Associate – *DataCamp*
- Python Basics – *ITI*
- MCIT Certificate Programs: Data Analytics – *IBM*
- Database Fundamentals – Mahara-Tech, *ITI*
- Atlassian Agile Project Management Professional Certificate – *Atlassian*
- Project Management Foundation – *PMI*® & *NASBA*
- Agile Explorer – *IBM*
- Big Data 101 – *IBM*
- Artificial Intelligence Fundamentals – *IBM*
- Data Fundamentals – *IBM*
- DEPI - Data analysis Specialist – *MCIT*
- FWD Initiative - Data Analysis Nanodegree – *Udacity* & *MCIT*
- FWD Initiative - Web Development Challenger – *Udacity* & *MCIT*
- FWD Initiative - Data Analysis Challenger – *Udacity* & *MCIT*

Education

- Managerial Accounting & Cost Dipl. – *Alexandria University*
- Bsc. Commerce (English) – *Alexandria University*

Accountant
Megalectric for Imports – ALX, EG

- Conducted data analysis on inventory prices using LIFO, examining data from 2007-2017, potentially impacting 40% of product prices.
- Analyzed financial data to identify deficiencies, duplications, and areas of extravagance.

Purchasing Coordinator/Accountant
Volta Trading – ALX, EG

- Analyzed and negotiated supplier data to establish purchase agreements and gather pricing information.
- Conducted detailed analysis of price proposals and financial reports to determine reasonable costs.
- Prepared purchase orders, achieving an 80% success rate in cost-effective procurement based on data analysis.

Customer Service Administrator
Horus Training Center – ALX, EG

- Dealt with customers inquiries & gathered data of potential customers.
- Worked on marketing monthly courses & achieved the monthly target with a success percentage of 85%.
- Handled the center accounting transactions.

Crew Coordinator Assistant
Wilhelmsen Ships Service – ALX, EG

- Collected and analyzed data for 50% of the ships handled from 2000-2010, ensuring comprehensive records.
- Arranged and analyzed data for hotel accommodations and transportation for crew members.

Let's Work Together!

I'm excited to hear about your project. Whether you need data analysis, visualization, data modeling, or any other related services, I'm here to help.

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