PROJECT PLAN FOR UPCOMING INFLUENZA SEASON

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PROJECT OVERVIEW

Goal: Optimize staffing allocation for the upcoming influenza season across states in the United States, ensuring efficient medical support distribution.

Motivation: The motivation behind this project stems from the critical need to provide adequate medical staffing during the influenza season, especially in areas with vulnerable populations prone to flu-related complications.

Objective: To strategically determine the timing and quantity of temporary medical staff deployment based on thorough analyses of historical influenza data, vulnerable population demographics, vaccination rates, and population density metrics.

Scope: Analyzing historical influenza trends, vulnerable population impact, and vaccination rates to optimize staffing allocation across states during the influenza season. The focus is on data-driven recommendations for efficient resource utilization and tailored medical support.

STAKEHOLDER INFORMATION

- Medical agency frontline staff (nurses, physician assistants, doctors)
- Hospitals and clinics using agency services
- Staffing agency administrators
- Influenza Patients

STAKEHOLDER COMMUNICATION

MEETINGS	Regular meetings will be scheduled with stakeholders, including medical agency frontline staff, hospitals/clinics, and agency administrators, to discuss project progress, data insights, and staffing recommendations.
EMAILS	Timely email updates will be sent to stakeholders to provide key information, project milestones, and any urgent updates regarding staffing strategies and influenza trends.
CALLS	Periodic conference calls will be arranged for detailed discussions, feedback sessions, and addressing specific concerns or questions raised by stakeholders.
CONTINGENCY PLAN	Quick communication, emergency meetings, and agile decision-making to adapt staffing strategies for continued efficient medical support during unforeseen challenges or changes in influenza trends.

SCHEDULE & MILESTONES

PHASE	WEEK	MILESTONES	ACTIVITIES
1	1	Stakeholder alignment and business requirements definition	Focus on aligning with stakeholders and defining clear business requirements for the research project.
	2	Data collection and exploratory data analysis (EDA) kickoff	Initiation of data collection activities and the beginning of exploratory data analysis.
	3	Statistical hypothesis testing and peer feedback integration	Test hypotheses statistically and refine analysis iteratively based on results. Gather feedback from peers and experts to enhance analytical approaches and interpretations. Foster collaborative decision-making through data-driven insights.
2	4 – 5	Statistical forecasting and action plan development	Use statistical forecasting techniques to predict staffing needs during the flu season. Develop action plans based on forecasted data to optimize resource allocation.
	6 – 7	Data visualization for insights synthesis	Create comprehensive data visualizations using the SCR (Situation, Complication, Resolution) format to highlight staffing trends, challenges, and solutions across states. Prepare detailed insights for stakeholders based on visualized data.
	8	Findings presentation and recommendations delivery	Present actionable insights and recommendations derived from the data analysis, focusing on optimized staffing strategies during the influenza season across different states. Use clear visuals and concise explanations to facilitate stakeholder understanding and decision-making.

DELIVERABLES

- **Comprehensive Research Report:** Includes conclusions, methodologies, and insights to guide future presentations and decision-making processes.
- **Interactive Stakeholder Dashboard:** Developed using Tableau for stakeholders to access real-time insights and make informed decisions easily.
- **Actionable Recommendations Presentation:** Final presentation highlighting actionable items, addressing concerns, and paving the way for implementation steps post-analysis.

HYPOTHESIS

- If regions have higher vaccination rates, then they experience lower influenza-related mortality rates among vulnerable populations compared to regions with lower vaccination rates.
- If individuals outside the age range of 10-60, such as children and the elderly, contract the flu, then they might face a higher risk of mortality due to the complications arising from their weakened immune systems.
- If states have higher population densities, then they experience more severe influenza outbreaks, necessitating higher levels of temporary medical staff deployment to manage cases effectively.
- If access to healthcare facilities is improved, especially in rural areas, then it correlates with lower rates of severe influenza-related outcomes such as hospitalizations and mortality.

DATA WISHLISTS

- Age and flu infection records.
- Mortality rates across age groups.
- Complications data (e.g., pneumonia).
- Health status and pre-existing conditions.
- Immune system strength by age.

THANK YOU