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[**Looking for a statistician or data analyst to help us analyze our data**](https://www.upwork.com/jobs/Looking-for-statistician-data-analyst-help-analyze-our-data_~0146540f02bc5d4584/?referrer_url_path=find_work_home)

Job feedback Looking for a statistician or data analyst to help us analyze our data

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**Fixed-price** - Intermediate - Est. Budget: $200

We have extensive datasets for two set periods of 6 months and we need to conduct detailed analysis with analysis similar to this

<https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2015.1030?journalCode=hlthaff>

To conduct a detailed analysis similar to the study on Yelp reviews of hospital care, we need to follow these steps, adapted to the context of your datasets:

1. **Dataset Preparation**:
   * Ensure you have two datasets for the distinct 6-month periods with reviews or surveys of hospital care.
   * Each dataset should include narrative text from reviews or feedback, timestamps, and any available ratings or scores.
2. **Data Cleaning and Preprocessing**:
   * Clean the text data by removing unnecessary characters, correcting misspellings, and standardizing terminology.
   * Parse and structure the data so that each review is associated with its metadata, such as the review date and hospital identifier.
3. **Topic Analysis**:
   * Use natural language processing (NLP) techniques to identify and extract topics from the narrative text. This can involve keyword extraction, sentiment analysis, and topic modeling (e.g., LDA or NMF).
   * Compare the topics identified with the domains of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, noting any additional domains covered by the reviews.
4. **Sentiment Analysis**:
   * Analyze the sentiment of the reviews to determine positive, negative, and neutral opinions.
   * Correlate specific topics with positive or negative sentiments to understand what aspects of care most impact patient satisfaction.
5. **Temporal Analysis**:
   * Compare the two time periods to identify any changes in patient feedback or emerging trends in the quality of care.
   * Determine if there are any seasonal effects or if the changes are likely due to improvements or declines in hospital services.
6. **Correlation with Hospital Performance**:
   * If possible, correlate the findings from the reviews with other measures of hospital performance or quality.
   * Identify which topics from the reviews are most closely associated with these external measures of hospital quality.
7. **Reporting and Actionable Insights**:
   * Summarize the key findings in a report that highlights the major themes, sentiment trends, and temporal changes.
   * Provide actionable insights for policymakers and hospital administrators, focusing on the areas that matter most to patients and caregivers, as revealed by the analysis.
8. **Feedback Loop for Continuous Improvement**:
   * Recommend establishing a feedback loop where the results of this analysis are regularly reviewed and used to inform improvements in hospital care and patient experience.