EXECUTIVE SUMMARY
SeniorShield : Preventing Elderly Falls with Data Analysis

Objective: The project aims to identify the circumstances associated with falls in the elderly through medical narratives and unsupervised machine learning techniques. The focus is on correlating falls with clinical factors and finding ways to prevent them.

METHODOLOGY

Exploratory Data Analysis: explore data from the primary_data.csv file, identifying relevant columns, handling missing values, and visualizing the distribution of ages, genders, and diagnoses.

Text Processing: preprocessing of medical narratives, including tokenization and conversion into numerical representations.

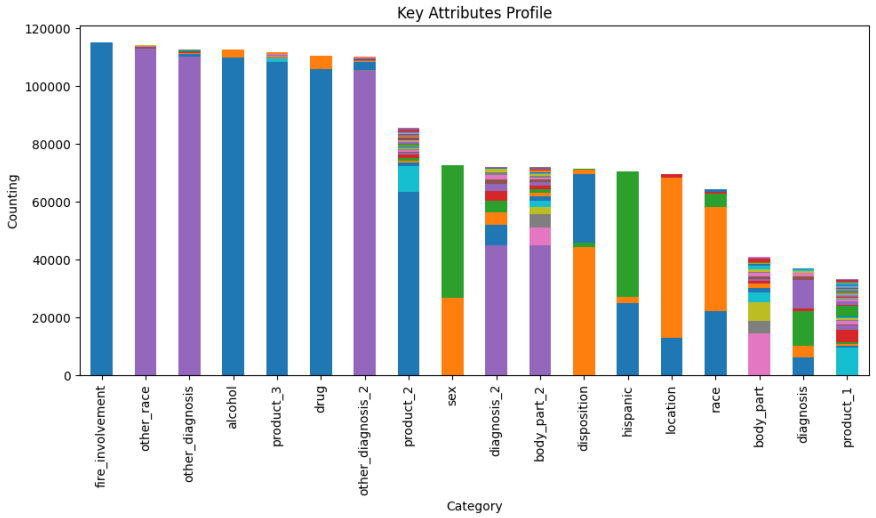
Topic Modeling: apply topic modeling techniques like LDA and NMF to identify relevant topics in the narratives.

Association Analysis: analyze relationships between variables such as age, gender, and diagnoses in relation to the identified topics.

Evaluation and Interpretation: evaluate the quality of identified topics and generated insights to reduce falls in the elderly.

Key Milestones and Achievements:

✓ Conducted data treatment, identifying relevant attributes.



✓ Performed category modeling, highlighting keywords from the narratives.

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Challenges Encountered and How They Will Be Overcome

Challenges include data quality, text processing, topic modeling, and results communication. These challenges will be addressed handling missing values, using text processing libraries, and adjusting modeling approaches.

Next Steps

We will continue refining the analysis based on feedback. If necessary, we will explore other unsupervised machine learning techniques.

SUMMARY: The SeniorShield project aims to prevent falls in the elderly through the analysis of medical narratives and machine learning techniques. The initial stages have already provided valuable insights, and we are committed to improving the quality of results.