Lung cancer stacking

Here's a brief description of each column:

1. GENDER: The gender of the individual (e.g., male, female, non-binary, etc.).
2. AGE: The age of the individual.
3. SMOKING: Indicates whether the individual smokes or not (e.g., Yes/No).
4. YELLOW_FINGERS: Indicates whether the individual has yellow fingers, which can be a sign of smoking-related health issues.
5. ANXIETY: Indicates whether the individual experiences anxiety-related symptoms (e.g., Yes/No).
6. PEER_PRESSURE: Indicates whether the individual feels peer pressure related to certain behaviors (e.g., smoking, alcohol consumption).
7. CHRONIC DISEASE: Indicates whether the individual has a chronic disease (e.g., asthma, diabetes).
8. FATIGUE: Indicates whether the individual experiences fatigue or tiredness.
9. ALLERGY: Indicates whether the individual has allergies to certain substances.
10. WHEEZING: Indicates whether the individual experiences wheezing, which can be a symptom of respiratory issues.
11. ALCOHOL CONSUMING: Indicates whether the individual consumes alcohol (e.g., Yes/No).
12. COUGHING: Indicates whether the individual experiences frequent coughing.
13. SHORTNESS OF BREATH: Indicates whether the individual experiences shortness of breath.
14. SWALLOWING DIFFICULTY: Indicates whether the individual has difficulty swallowing.

15. CHEST PAIN: Indicates whether the individual experiences chest pain.
16. LUNG_CANCER: Indicates whether the individual has been diagnosed with lung cancer (e.g., Yes/No).

With the dataset containing health-related attributes and behaviors of individuals, there are several potential analyses and tasks that you can perform. Here are some common data analysis and research areas that can be explored with this dataset:

1. **Health Risk Assessment**: Analyze the relationships between different health-related attributes (e.g., smoking, chronic disease, fatigue) and identify potential risk factors for certain health conditions (e.g., lung cancer).
2. **Respiratory Health Analysis**: Investigate the impact of smoking, wheezing, shortness of breath, and coughing on respiratory health. Identify correlations between these factors and potential respiratory issues.
3. **Health Behavior Analysis**: Explore the association between peer pressure, alcohol consumption, and smoking behavior. Understand how social factors influence health-related behaviors.
4. **Gender and Health**: Examine how gender plays a role in health-related attributes and potential health conditions.
5. **Age and Health**: Study the relationship between age and health-related symptoms. Identify any age-related patterns or trends.
6. **Allergies and Health**: Analyze the prevalence of allergies and their association with other health conditions and behaviors.

7. **Lung Cancer Prediction**: Build a predictive model to identify factors that contribute to the likelihood of developing lung cancer. Use this model for lung cancer risk assessment.
8. **Symptom Clustering**: Use clustering algorithms to group individuals based on similar health symptoms and behaviors. This can help identify distinct health profiles.
9. **Public Health Interventions**: Based on the analysis, develop targeted interventions or public health campaigns to address specific health risks or behaviors.
10. **Healthcare Resource Allocation**: Use insights from the data to allocate healthcare resources more effectively, focusing on areas with higher health risks.