



LUNG CANCER PREDICATION

PROBLEM

Traditional lung cancer diagnostics are invasive, costly, and often detect cancer at advanced stages. This project will develop a machine learning model to predict lung cancer likelihood based on patient data, supporting early, non-invasive detection.





RELATED WORK

🔗 Machine Learning for Lung Cancer
Diagnosis, Treatment, and Prognosis

🔗 Deep learning for lungs cancer
detection: a review

🔗 Predicting lung cancer survival based on
clinical data using machine learning: A
review

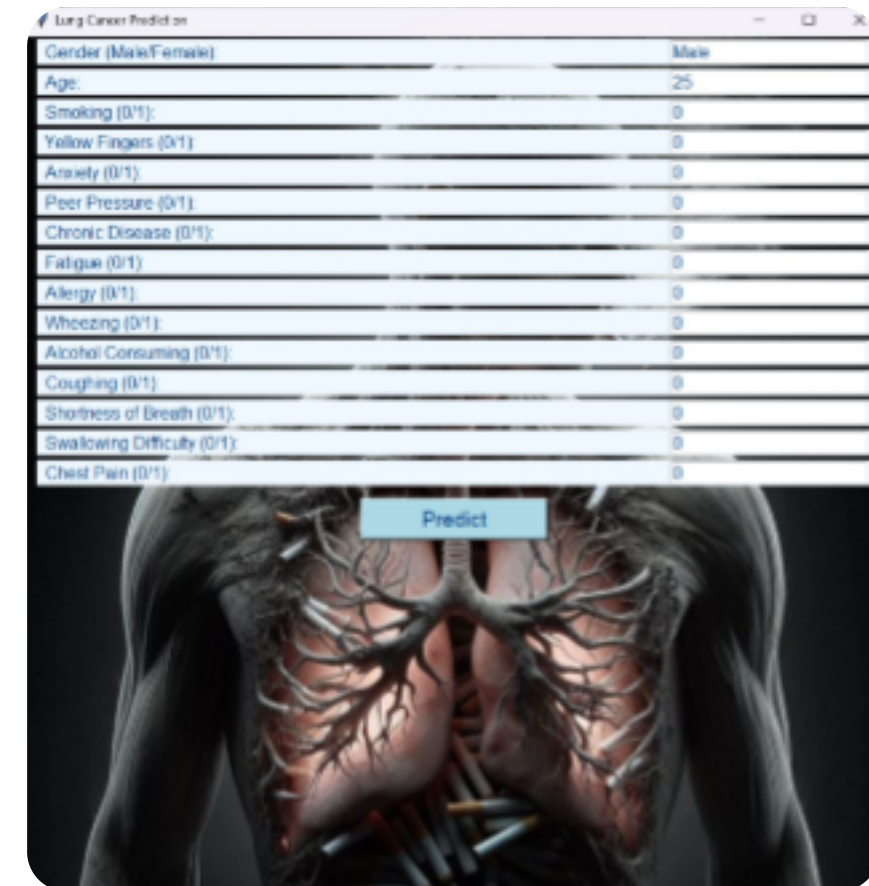


PROPOSED METHODOLOGY

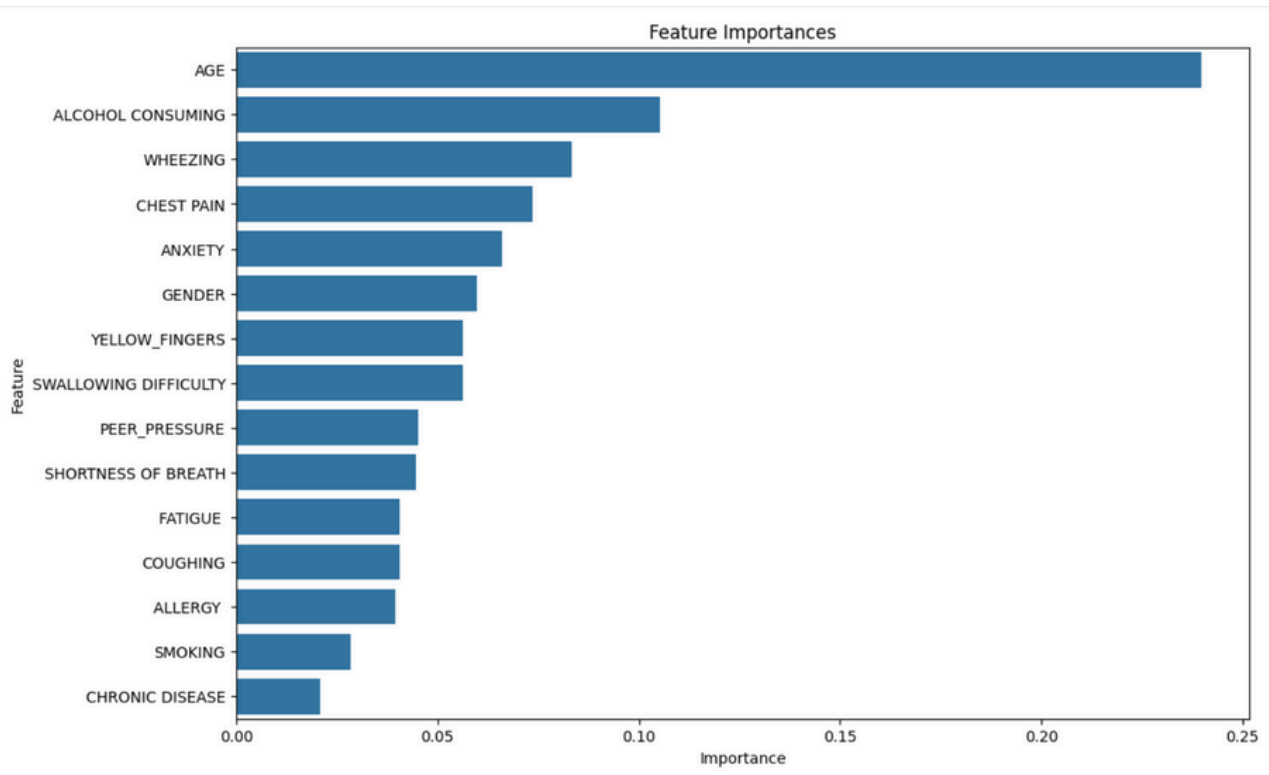
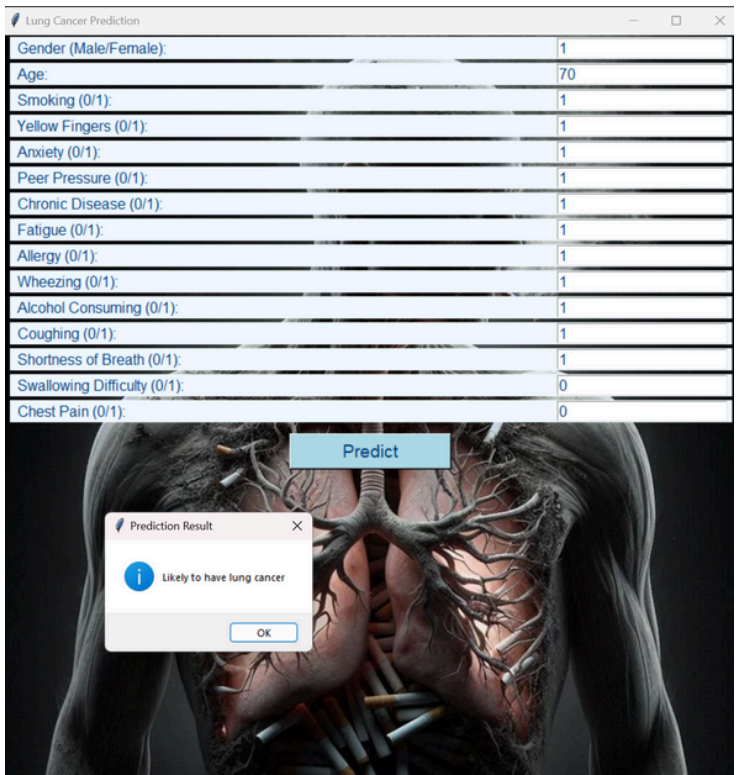
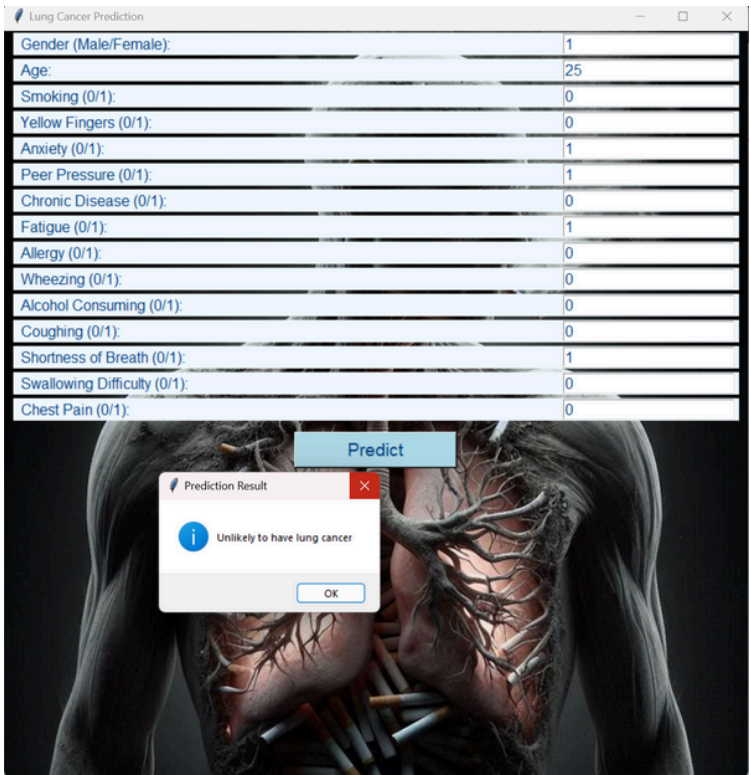
- 1- Data Collection & Preprocessing
- 2- Exploratory Data Analysis (EDA)
- 3- Model Development:(Logistic Regression, Random Forest, SVM, KNN)
- 4- Model Evaluation
- 5- Develop a user-friendly interface

RESULTS

- Scalable Solution
- Improved Early Detection
- Reduction in Diagnostic Costs
- Support for Personalized Treatment Plans
- User-Friendly Interface



RESULTS



| SVM after hyper parameter tuning called optuna | 95 %



CONCLUSION

This project focuses on creating a machine learning model to predict lung cancer early using patient data. It evaluates different algorithms like Logistic Regression, Random Forest, Decision Trees, and SVM to identify the most effective approach. The model will be integrated into a clinical interface for easy use, aiming to improve early detection, reduce costs, and contribute to research in early cancer diagnosis.



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THANK YOU