

# MINI PROJECT INTELLIGENT HEART RISK PREDICTION

MCTA 3371 SECTION 2

# OUR TEAM

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# TOPICS

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# OBJECTIVE

- To predict the likelihood of heart disease based on patient data.
- To identify key factors contributing to heart disease.
- To develop a robust model for early detection.

# METHODOLOGY

## 1. Data Collection:

- Data obtained from medical records and public datasets.

## 2. Data Preprocessing:

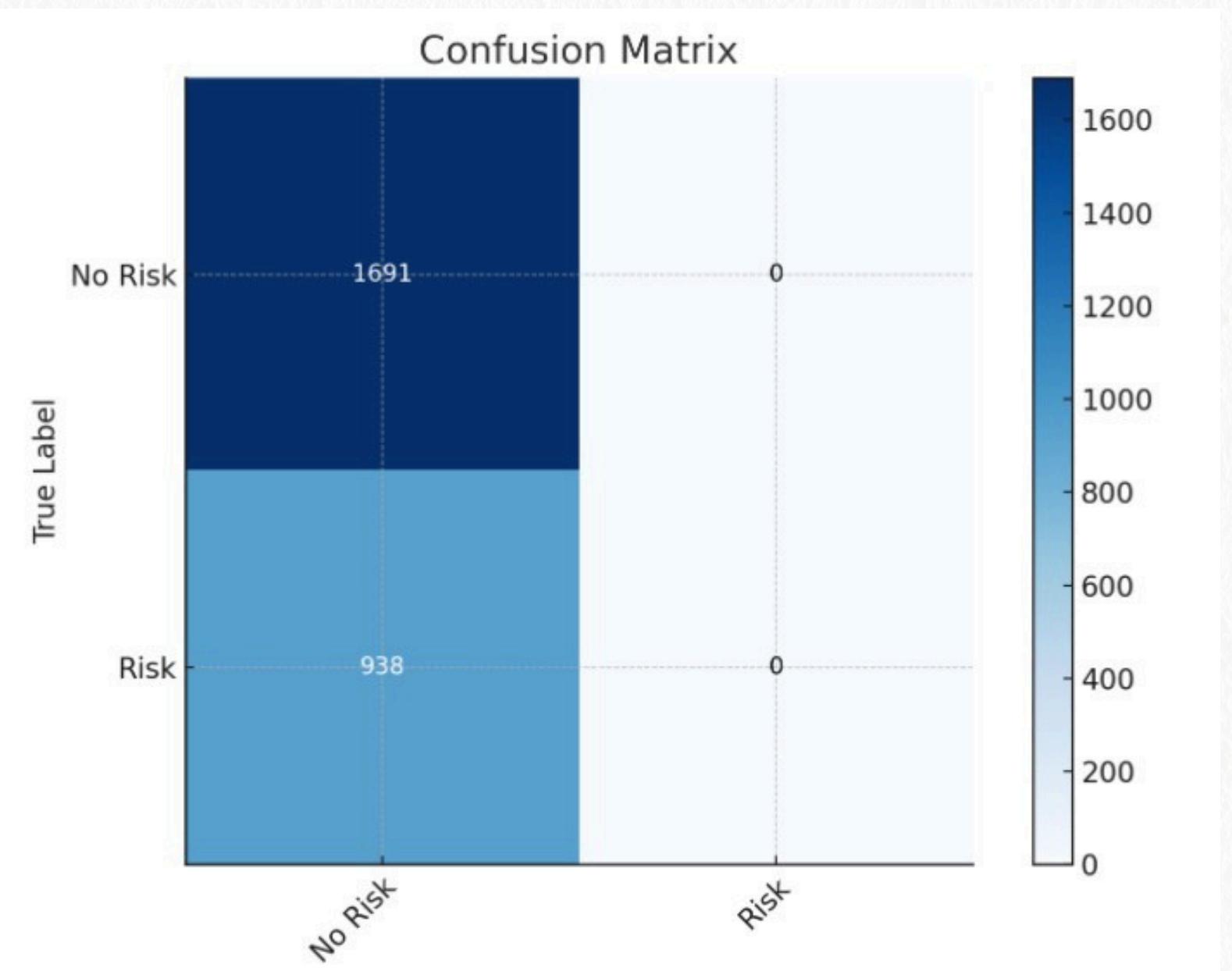
- Cleaning, normalization, and handling missing values.

## 3. Modeling Techniques:

- Machine learning algorithms like logistic regression, SVM, and decision trees.

## 4. Evaluation Metrics

# RESULTS



THE NEURAL NETWORK MODEL ACHIEVED AN ACCURACY OF 64.32% ON THE TEST DATASET

# DISCUSSION

The heart disease prediction project demonstrates the importance of using machine learning to analyze health data for early diagnosis. The results indicate that key factors such as age, blood pressure, cholesterol levels, and lifestyle choices significantly influence the model's accuracy. However, challenges such as data quality, class imbalance, and overfitting must be addressed to ensure reliability and generalizability.

In practical applications, integrating such predictive models into healthcare systems could assist in prioritizing high-risk patients. Collaboration with medical professionals to validate and interpret predictions is essential for effective deployment. Further research could explore incorporating real-time patient data and testing on diverse populations to improve model robustness and applicability.

# CONCLUSION

The heart disease prediction project highlights the effectiveness of machine learning in identifying at-risk individuals using key health indicators. This tool can aid healthcare professionals in early detection and intervention, improving patient outcomes. Future work could focus on refining models and integrating real-time data for broader applicability.



**THANK YOU**