PREDICTING PATIENT READMISSION RISK

A Data-Driven Approach to Improve Patient Outcomes and Optimize Hospital Resources

OUR TEAM

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OBJECTIVE

To predict the likelihood of patient readmission, helping healthcare providers make informed decisions for improved care and resource allocation.

STAKEHOLDERS

- Hospital administrators
- Healthcare providers

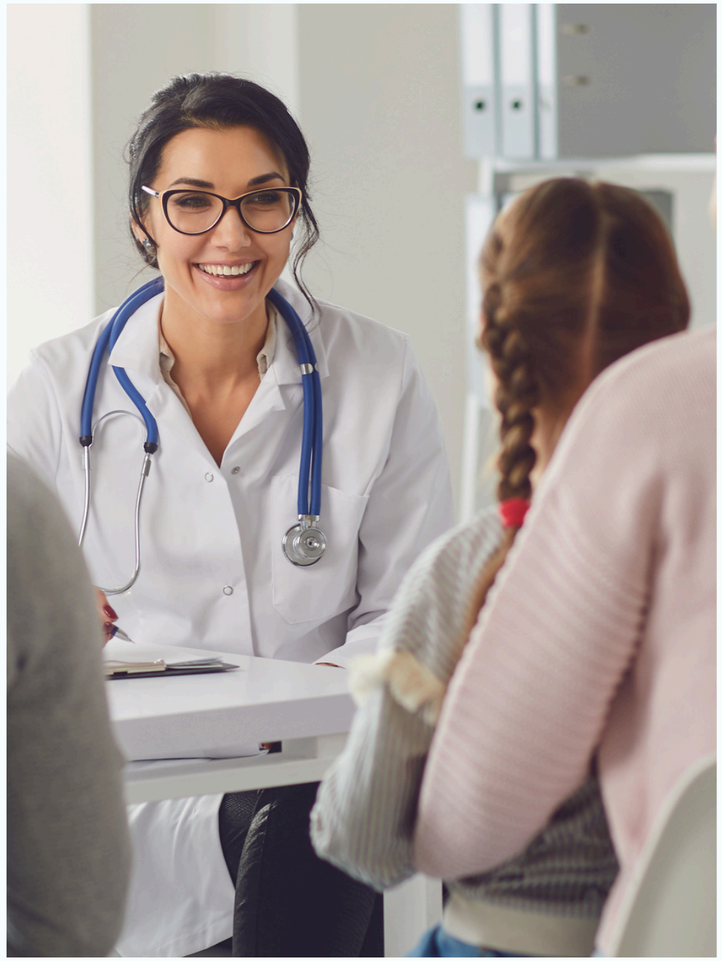
PROJECT SCOPE

- **Focus on predicting readmission risk within 30 days.**
- **Use historical patient data to uncover patterns.**
- **Provide actionable insights for reducing readmission rates.**

DATA OVERVIEW

Our dataset includes;

- ★ Patient demographics
- ★ Hospitalization details
- ★ Lab tests
- ★ Medical history



SOLUTION APPROACH

This project applies machine learning techniques, such as feature engineering and algorithms like logistic regression, decision trees, and random forests, to predict patient readmission risk within 30 days.

INTERGRATION

We developed a website that predicts readmission risk based on patient information.

This model can be intergraded alongside existing systems in hospitals.

It will help optimize discharge planning, follow-up care scheduling, and resource allocation.

With such early intervention, readmission can be averted.

STAKEHOLDER ROLES

- ★ IT team - Integration
- ★ Care teams - actioning insights
- ★ Finance team - assessing cost-benefit.

FUTURE PLANS

IT team - Integration
Care teams - actioning insights
Finance teams - assessing cost-benefit.

Refinements

Plan for ongoing model tuning and recalibration as more data becomes available.

Expansion

Expand the model to predict other outcomes, i.e. length of hospital stay.

IMPACT

- Improved patient outcomes and satisfaction.
- Less penalties associated with high readmission rates.
- Reduced financial strain on patients.

THANKYOU!

ANY QUESTIONS?