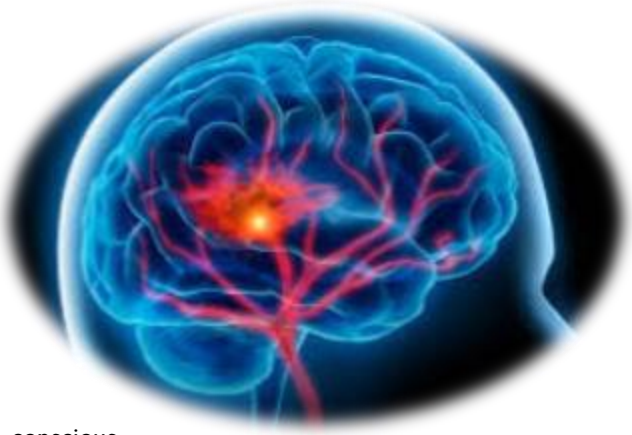
AI-POWERED STROKE RISK PREDICTION

PROJECT BY: BHAVYA BALACHANDRAN, AMOL HANDE, POOJA SULAGAM



PROACTIVE DECISION-MAKING MODEL FOR PREVENTIVE HEALTHCARE

With this end-to-end predictive model, our clients gain real-time risk insights and forecasting to optimize intervention strategies, improve patient outcomes, and reduce long-term care costs.

This model can support clinical risk scoring, reduce emergency incidence rates, and attract interest from health-conscious people, institutional healthcare buyers and investors.

TARGET AUDIENCE:

Our solution is designed for hospitals, clinics, insurance companies, and digital health startups aiming to enhance preventive care through predictive analytics.

These organizations require a data-driven tool to prioritize high-risk patients, optimize healthcare resources, and reduce long-term treatment costs.

PURPOSE:

Stroke is a leading cause of mortality and long-term disability worldwide.

Early intervention can save lives and significantly reduce healthcare expenditures.

Our machine learning-based stroke prediction model provides a clinical decision support tool that proactively identifies patients at elevated risk, enabling timely medical attention.

APPROACH:

We developed a comprehensive end-to-end predictive model using a real-world patient dataset.

Our methodology included:

- Data pre-processing including Label Encoding
- Model training:

  Using Logistic Regression, Naïve Byes, Decision Trees, Random Forest, and K Nearest Neighbours
- Feature selection focusing on age, hypertension, heart disease, BMI, etc. main factors.
- Evaluation using accuracy, F1-score, and AUC-ROC to select the most effective model.
- Real-time risk prediction powered by dynamic user input and a trained model.

OUTCOME:

The final solution offers:

- A deployable, high-performing stroke prediction model.
- Live dashboard visualizations and interpretable outputs.
- Live prediction system to predict stroke risk according to the user inputs

We are seeking partnerships with healthcare, life science organizations and investors looking to harness AI for preventive medicine.