**STROKE PREDICTION ANALYSIS**

**BACKGROUND**

Stroke is a medical condition where the blood supply to part of your brain is reduced, preventing brain tissue from getting oxygen and nutrients. According to the statistics someone in the United States has a stroke every 40 seconds and every 4 minutes, someone dies of stroke. Early detection and treatment are extremely important in such cases to save a person's life. If we can predict whether a person will have a stroke, we can save them from this life-threatening condition

**SOLUTION**

The advancement of technologies can help us in the early detection and prevention of stroke. We can predict stroke using machine learning models on a dataset including details like age, gender, hypertension, heart disease, marital status, glucose level, BMI, smoking status, and if the person experienced a stroke.

**PACKAGES USED**

1. **Pandas:** Provides easy to use tools for data manipulation and analysis.
2. **Scikit learn:** It is used to build machine learning models. The sklearn library contains a lot of efficient tools for machine learning including classification and regression.
3. **Seaborn:** It is a visualization library provided by python which is used to create attractive and informative statistical graphs**.**
4. **NumPy:** Used to perform mathematical and scientific tasks. It contains a multi-dimensional array and matrix data structures.
5. **Joblib:** Used for saving the trained models in a file and restore them in order to reuse it to compare the model with other models (serialize/deserialize module)
6. **Matplotlib:** Usedfor making any plots show up inside of the notebook