# Stroke Data

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Am I Having a Stroke?

Stroke is the fourth leading cause of death in the U.S., and the leading cause of serious, long-term adult disability.

This year, a stroke will occur every 40 seconds and will take a life every 4 hours.

Recognizing symptoms and acting F.A.S.T. can save a life and decrease the chances of permanent disabilities.

If you believe that you or a loved one are experiencing a stroke, call 911 or go immediately to the emergency room.
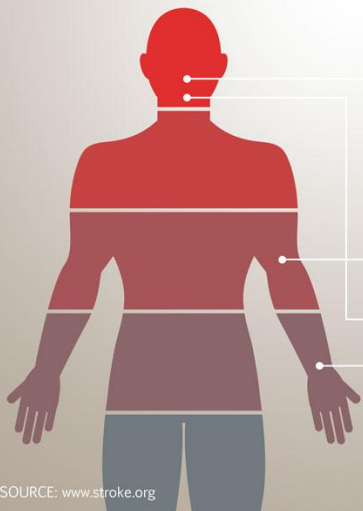
F **FACE**
Ask the person to smile. Does one side of the face droop?

A **ARMS**
Ask the person to raise both arms. Does one arm drift downward?

S **SPEECH**
Ask the person to repeat a simple phrase. Is their speech slurred or strange?

T **TIME**
If you observe any of these signs, call 911 immediately.

SOURCE: www.stroke.org

Data and Project Description

- **The Data in this project contained risk factors that affect the probability of stroke. Factors include smoking, body mass index, hypertension, heart disease, average glucose level, and more. The project objective is to write a predictive model to predict whether a Person is a risk for stroke.**

Stroke Definition from https://www.cdc.gov/stroke/about.htm

- A stroke, sometimes called a brain attack, occurs when something blocks blood supply to part of the brain or when a blood vessel in the brain bursts. In either case, parts of the brain become damaged or die. A stroke can cause lasting brain damage, long-term disability, or even death.
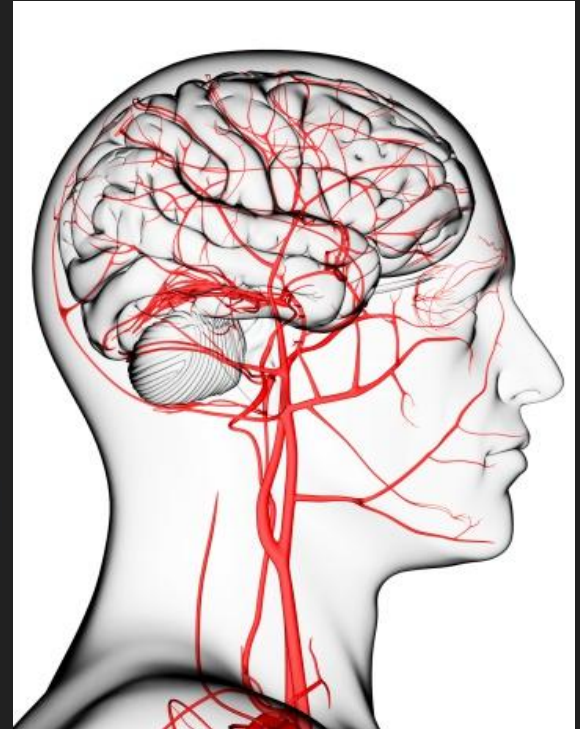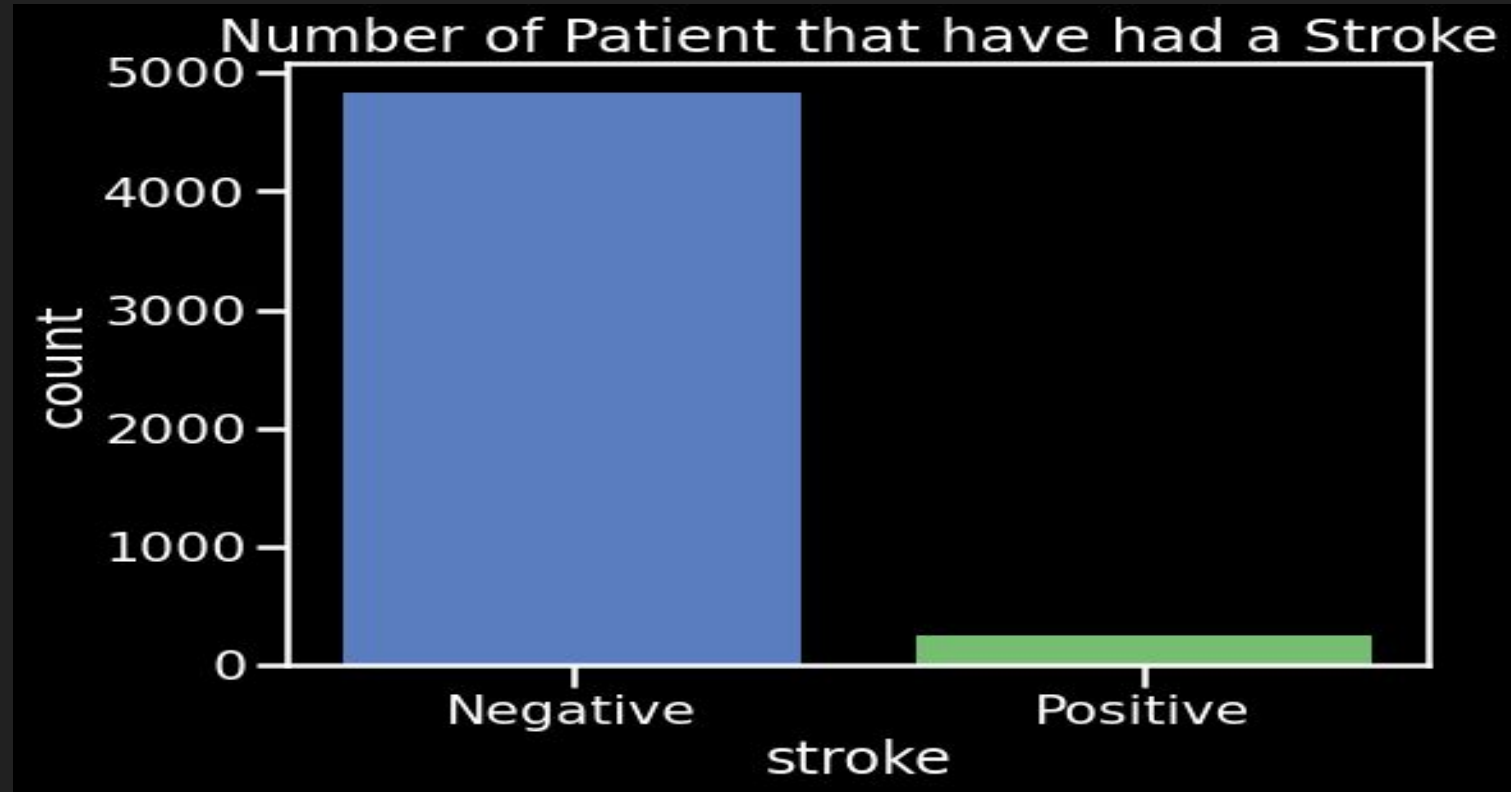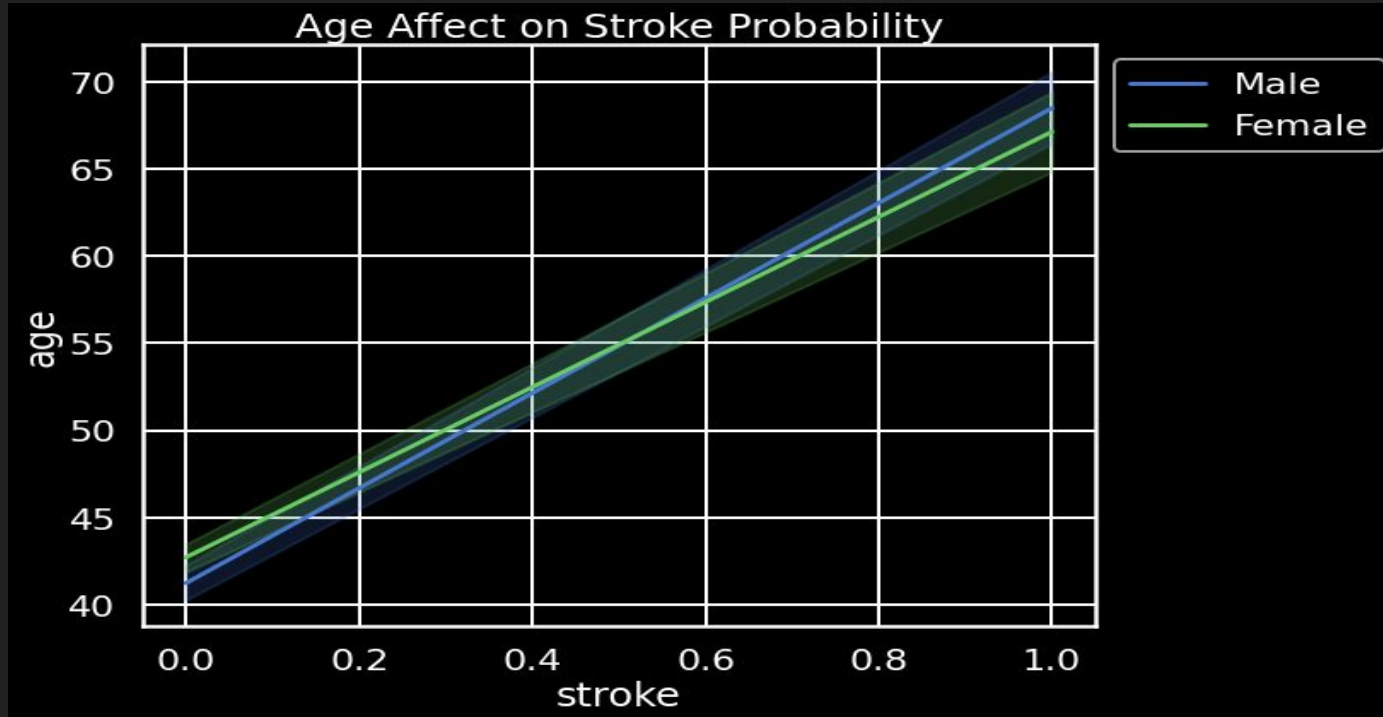
Stakeholders

The Model will be used by people
To assess whether or not they are at
A higher risk for stroke and to seek
Treatment or take preventive
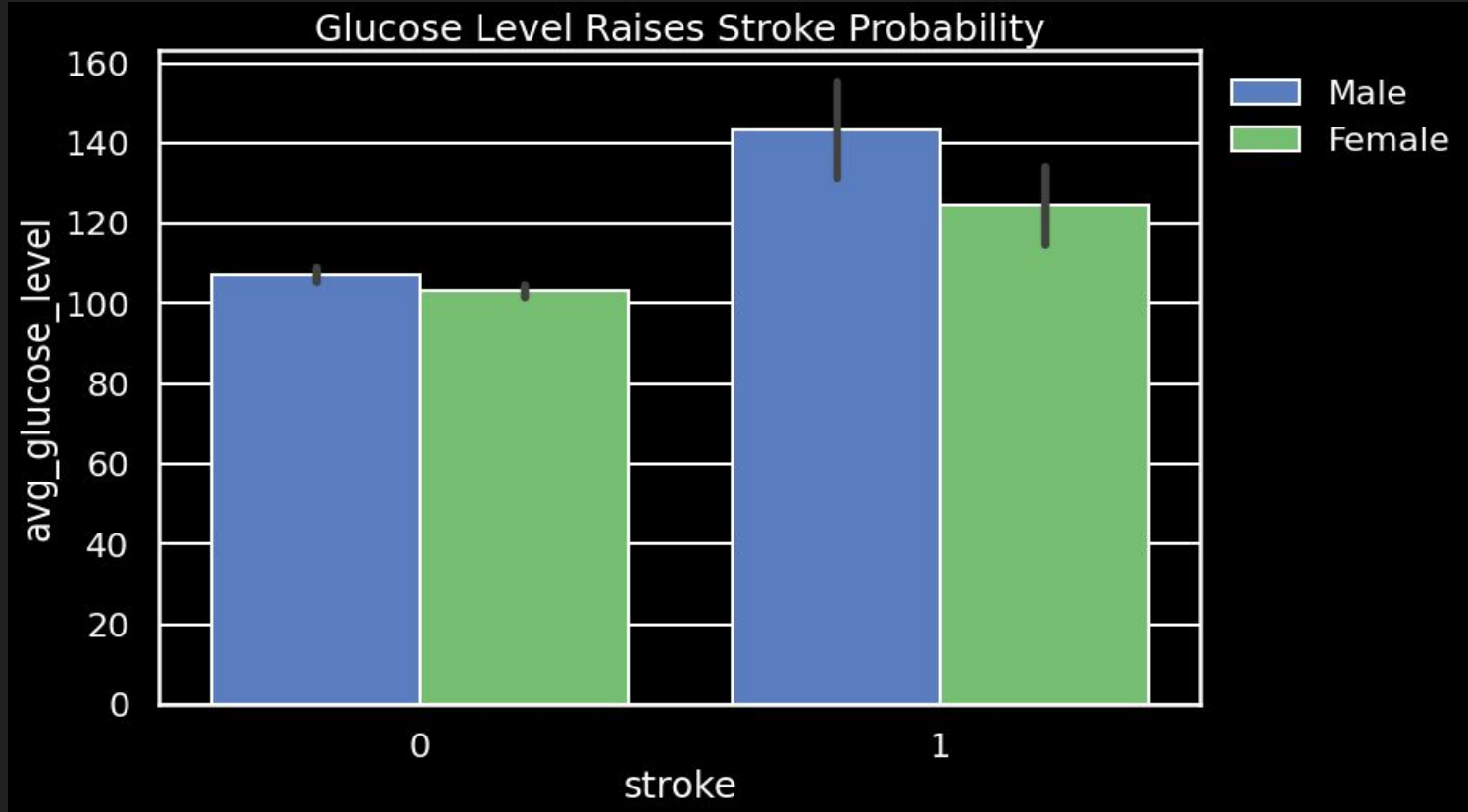Action if they are at a higher risk
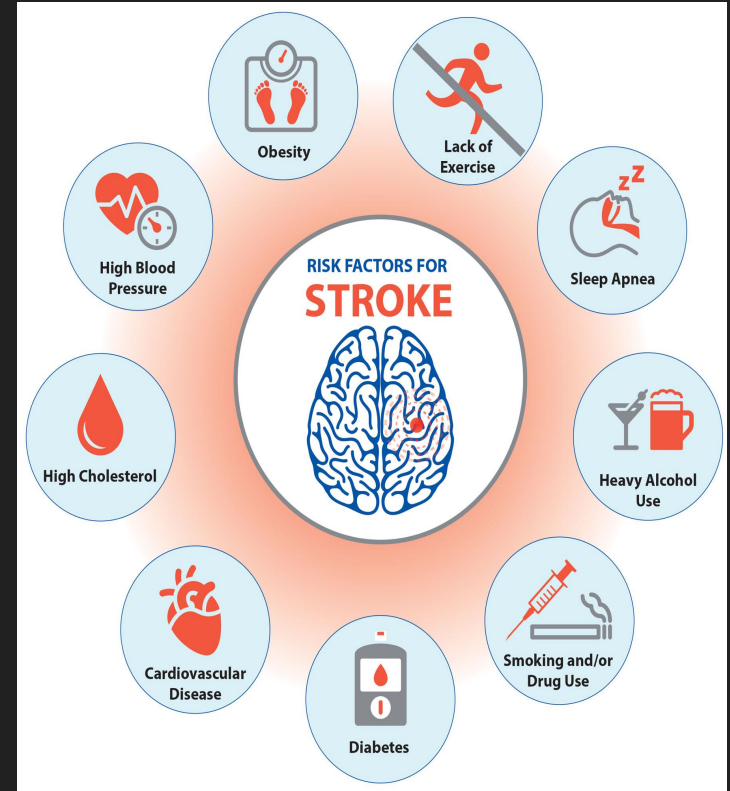
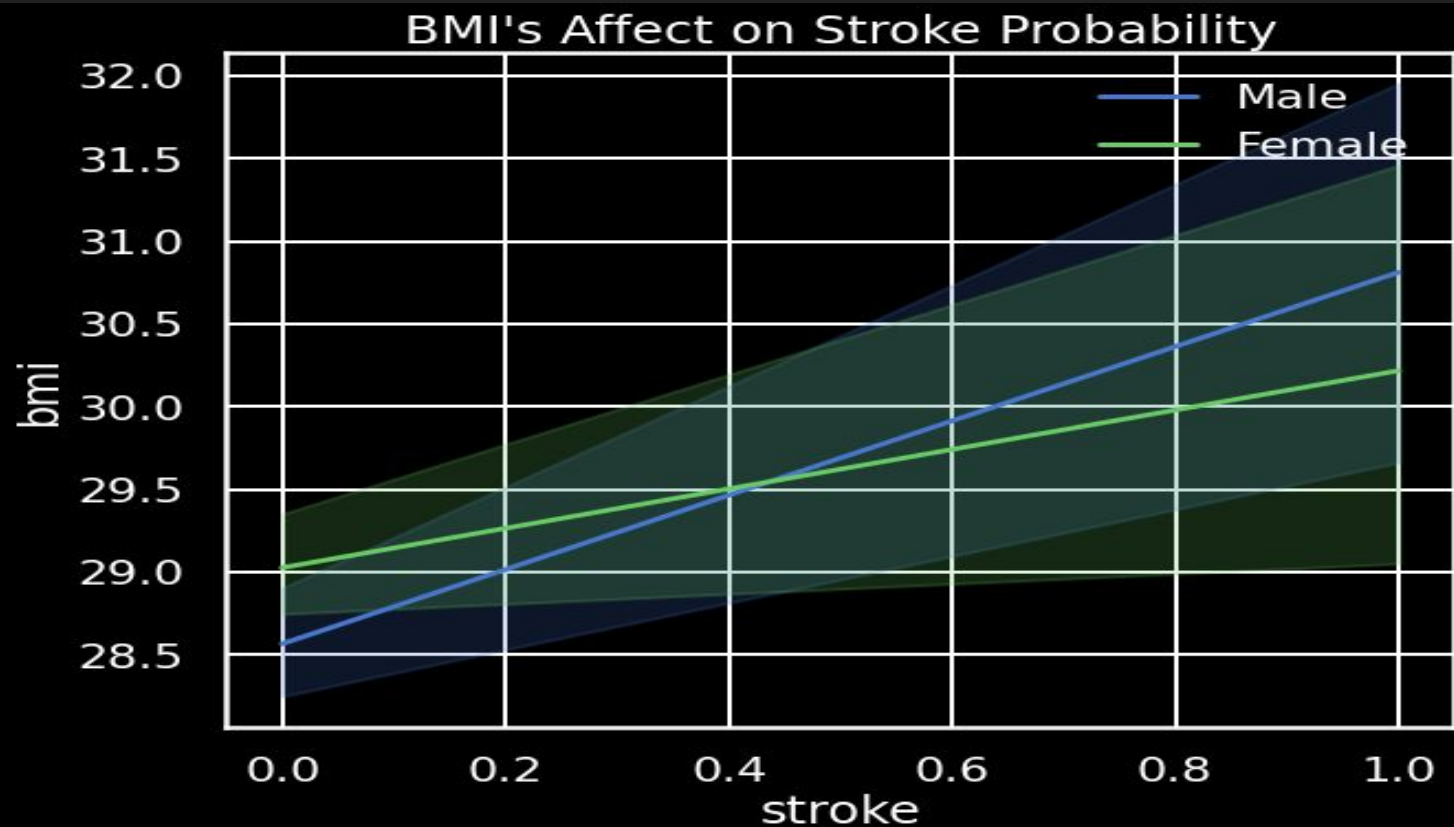# Data is Skewed Highly to the Negative

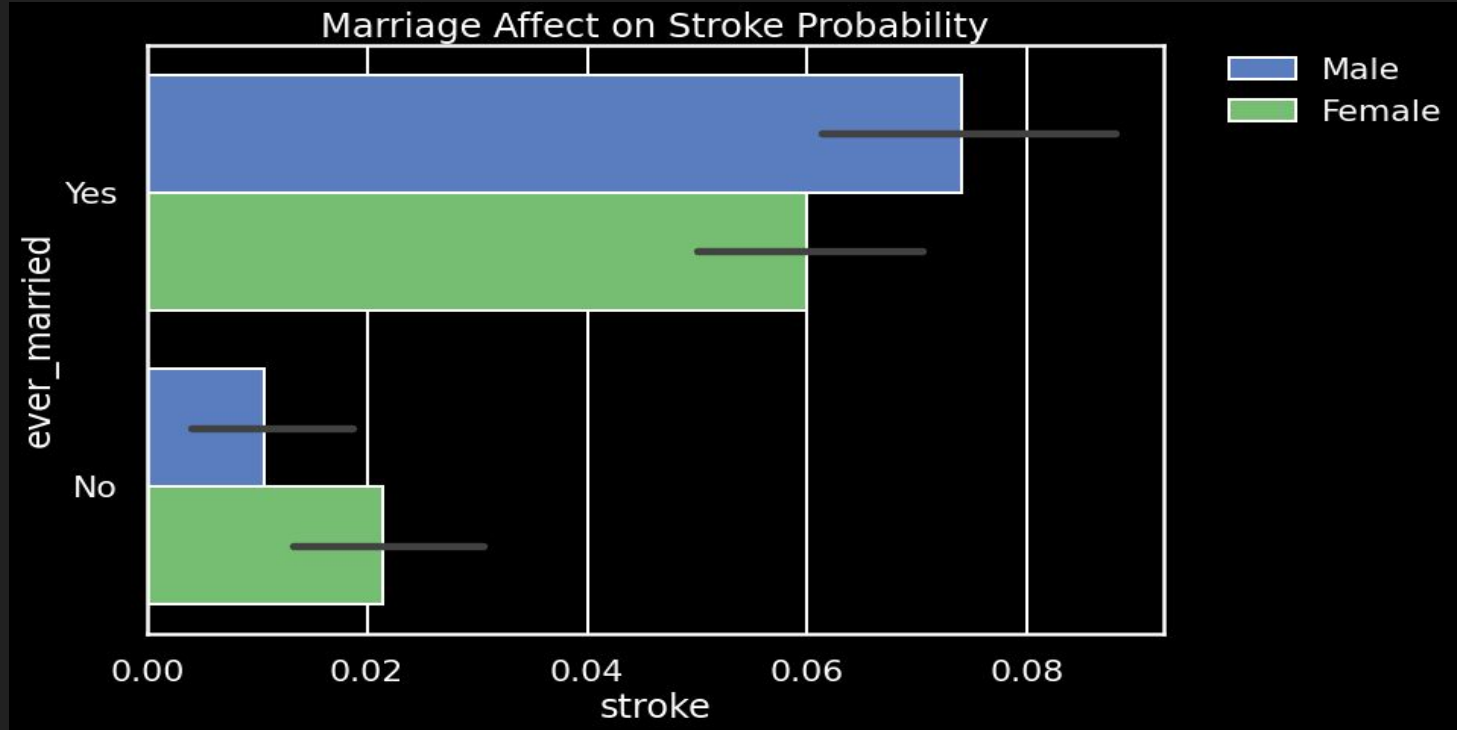# Aging Has an Effect on Stroke Probability

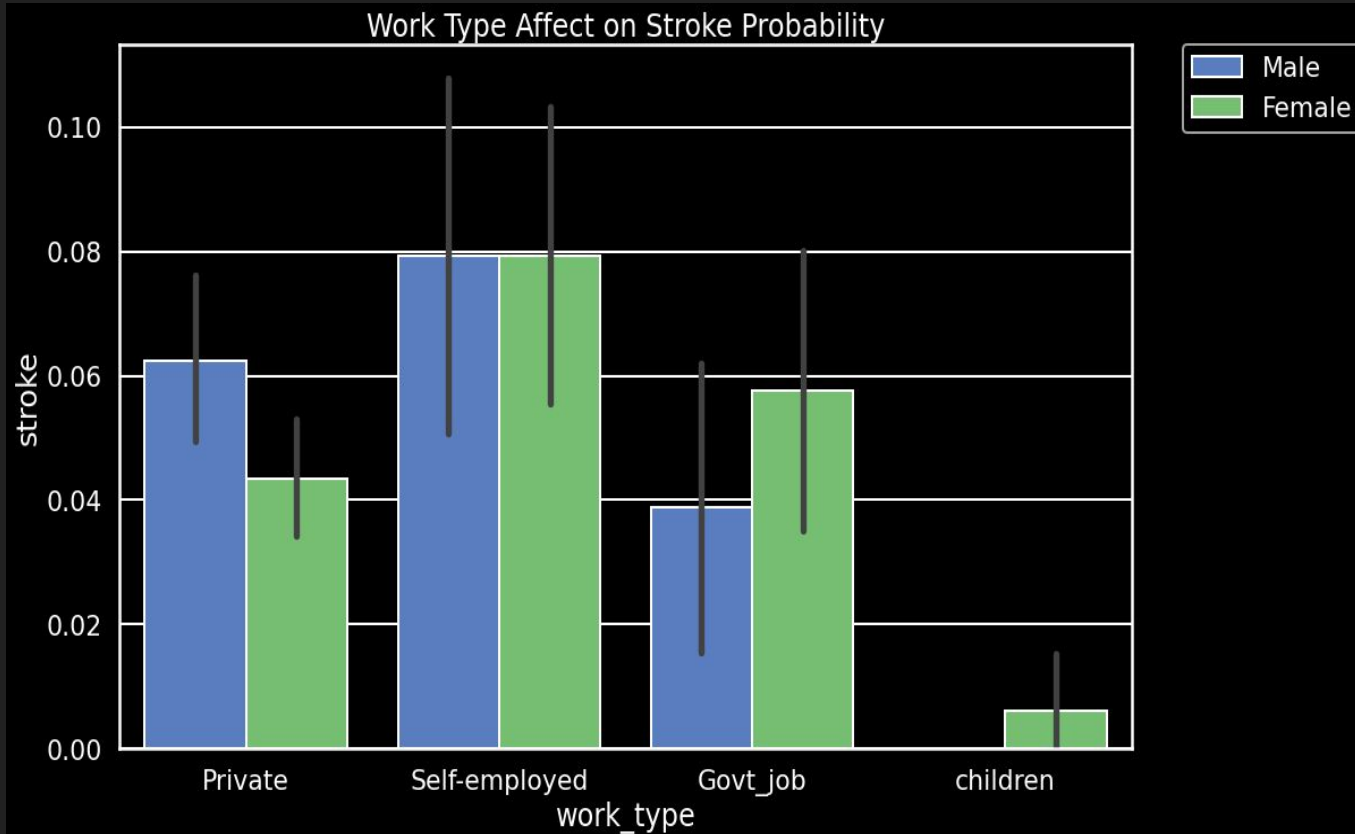# Higher Glucose Level Makes Stroke Probability Higher

The Higher Body Mass Increases the Probability of Stroke
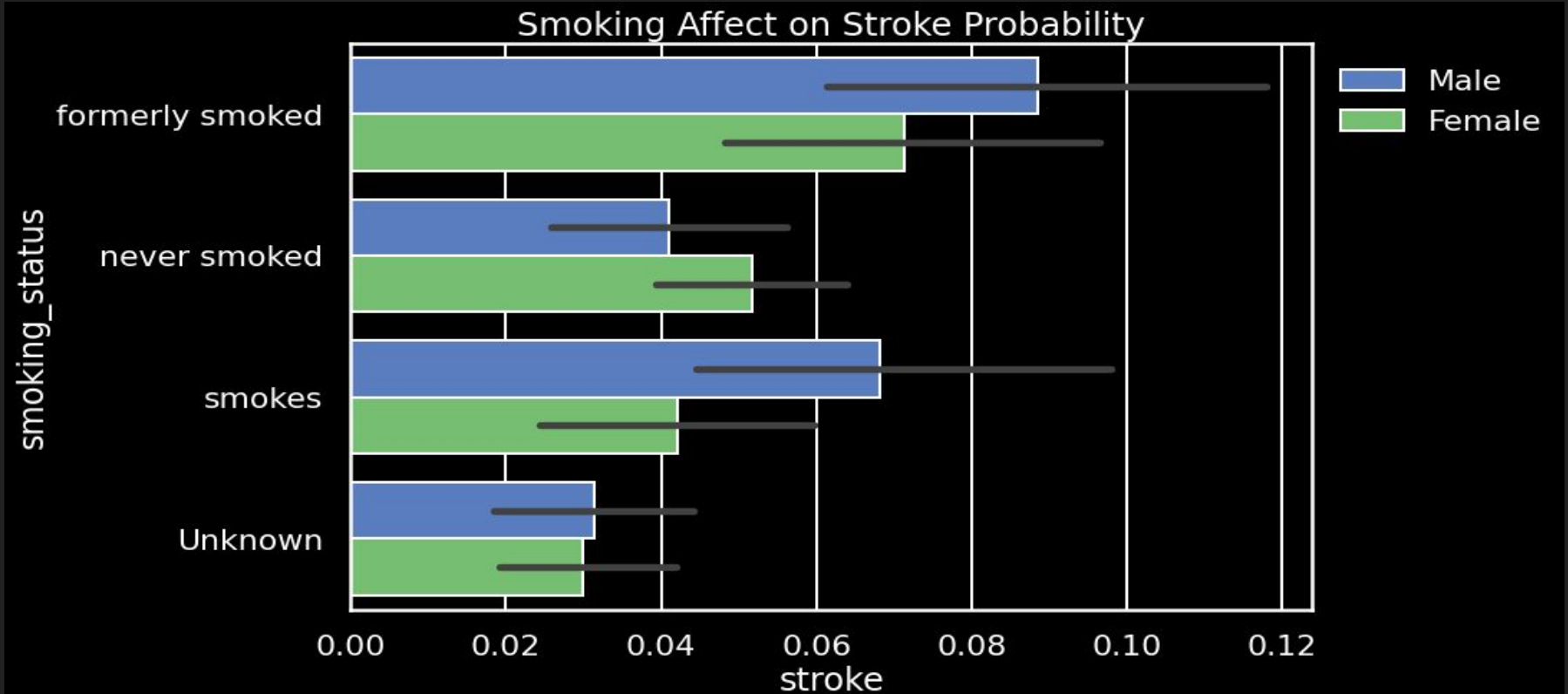

BMI's Affect on Stroke Probability

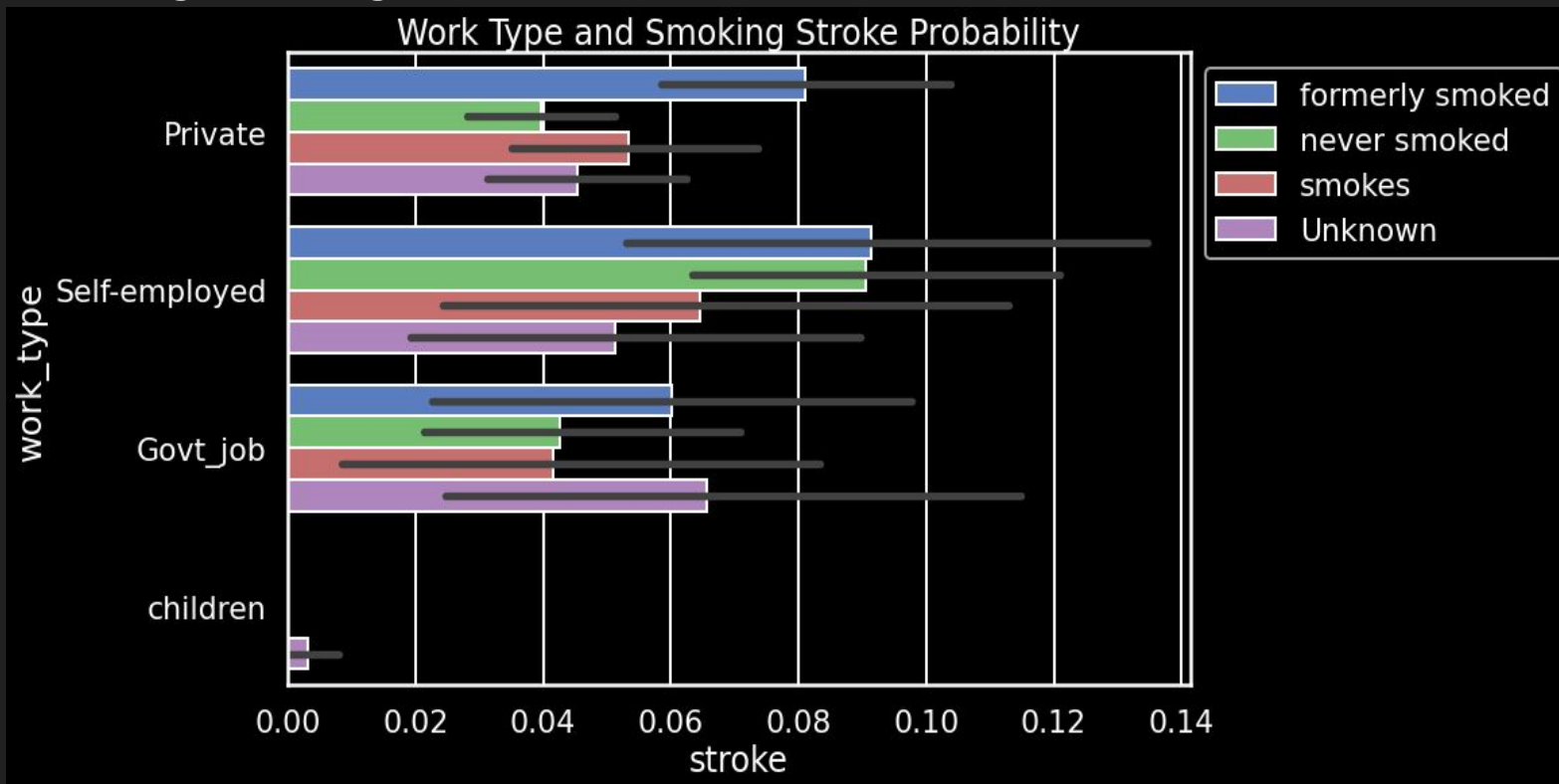# Married People Have a High Probability of Stroke

Self Employed People seem to be at Higher risk of Stroke

# Smokers and Former Smokers seem to be at a Higher risk of a Stroke

Self Employed People are at higher risk of Stroke in all Smoking Categories

Model Evaluation

- Minimizing False Positives would be the most crucial aspect of this model no need to cause someone undo Panic.

- Minimize False Negatives a person would need to start treatment Right away to limit or minimize the effect on the Brain and Surrounding tissue.

- Misdiagnosing a stroke as another illness can drastically impact a patient's chance of recovery. Stroke misdiagnosis may result in **a brain hemorrhage, permanent brain damage and possibly Death.**
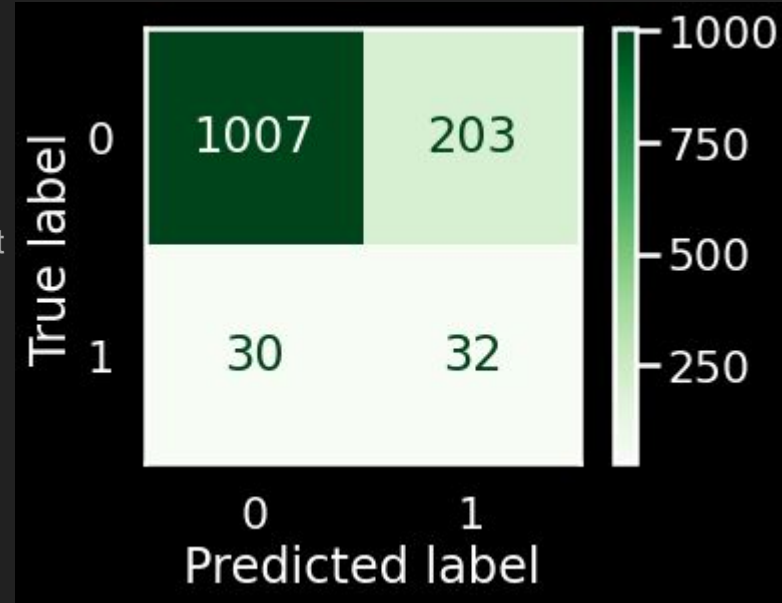
Recommendations

- Continue to tune the model to make more to minimize the false predictions.

- Self employed individuals should reduce stress.

- To help prevent stroke lower glucose level, don't smoke, exercise, and as you are aging seek medical advice from a professional to strategize on a plan to lower your risk of stroke.

PREVENTION

Keep Your Blood Pressure Low

Lower Your Cholesterol

Eat Healthy Food

Exercise Regularly

Treat Sleep Apnea

Manage Your Diabetes

Drink in Moderation

Stop Smoking

Avoid Stress

Maintain Healthy Weight