

## Sprint-3

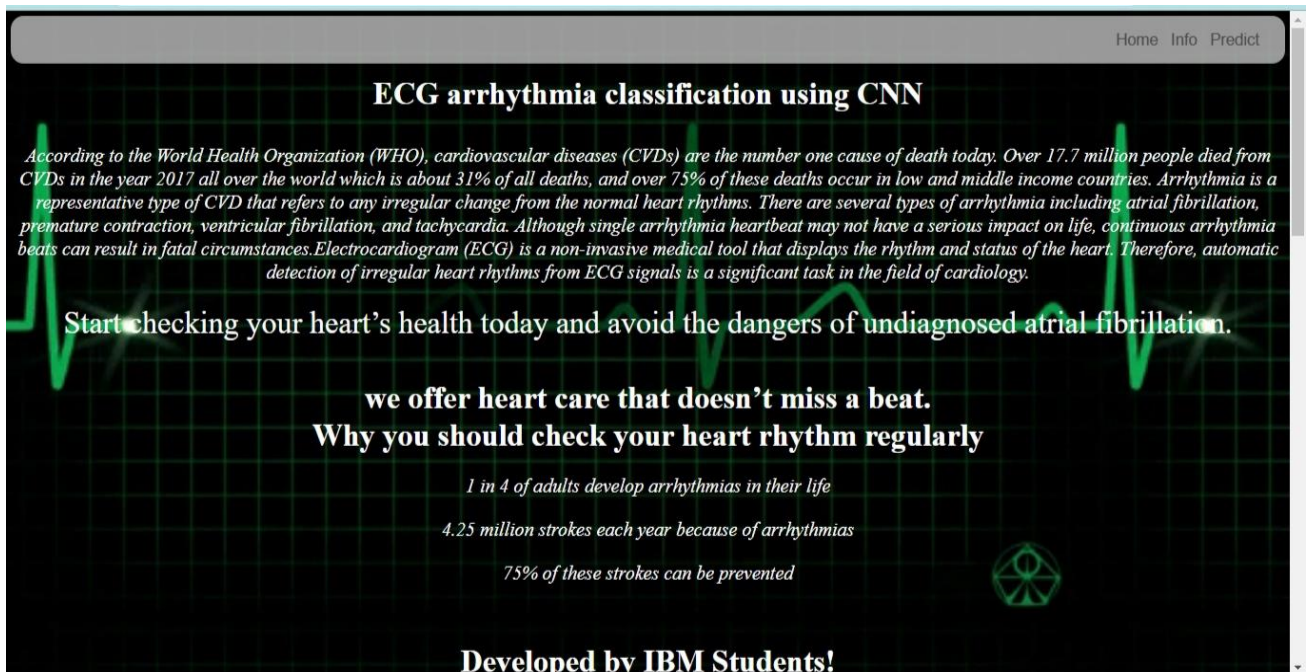
### Classification of Arrhythmia by Using Deep Learning With 2-DECG Spectral Image Representation

#### Description of USN and Screenshots:

##### USN-5:

As a user, I can enter the webpage and view the homepage about the information about Electrocardiography (ECG) giving a clear perspective of the signals. Start checking your heart's health today and avoid the dangers of undiagnosed atrial fibrillation.

##### Screenshot:



## Why you should check your heart rhythm regularly:

- ★ 1 in 4 adults develop arrhythmias in their life
- ★ 4.25 million strokes each year because of arrhythmias
- ★ 75% of these strokes can be prevented

## The information page:


[Home](#) [Info](#) [Predict](#)

### ECG

#### NORMAL

Note that the heart is beating in a regular sinus rhythm between 60 - 100 beats per minute (specifically 82 bpm). All the important intervals on this recording are within normal ranges.

The normal ECG patterns seen in children differ considerably from those in adults.




#### VENTRICULAR FIBRILLATION

A life-threatening heart rhythm that results in a rapid, inadequate heartbeat.

Ventricular fibrillation (VF) is a rapid, life-threatening heart rhythm starting in the bottom chambers of the heart. It can be triggered by a heart attack.

Because the heart doesn't pump adequately during ventricular fibrillation, sustained VF can cause low blood pressure, loss of consciousness or death.

Emergency treatment includes immediate defibrillation with an automated external defibrillator (AED) and cardiopulmonary resuscitation (CPR). Long-term therapy includes implantable defibrillators and medications to prevent recurrence.



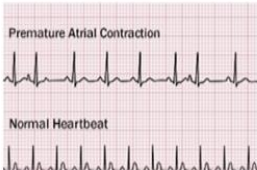
#### PREMATURE ATRIAL CONTRACTION

Usually, premature atrial contractions have no clear cause and no health risks. In most cases, premature atrial contractions aren't a sign of heart disease and just happen naturally.

But some people who have PACs turn out to have related heart conditions, such as:

- Cardiomyopathy (a weakened heart muscle)
- Coronary heart disease (fatty deposits in coronary blood vessels)

But some people who have PACs turn out to have related heart conditions, such as:




#### PREMATURE VENTRICULAR CONTRACTIONS

Extra, abnormal heartbeats that begin in one of the heart's two lower chambers.

Premature ventricular contractions (PVCs) occur in most people at some point. Causes may include certain medication, alcohol, some illegal drugs, caffeine, tobacco, exercise or anxiety.

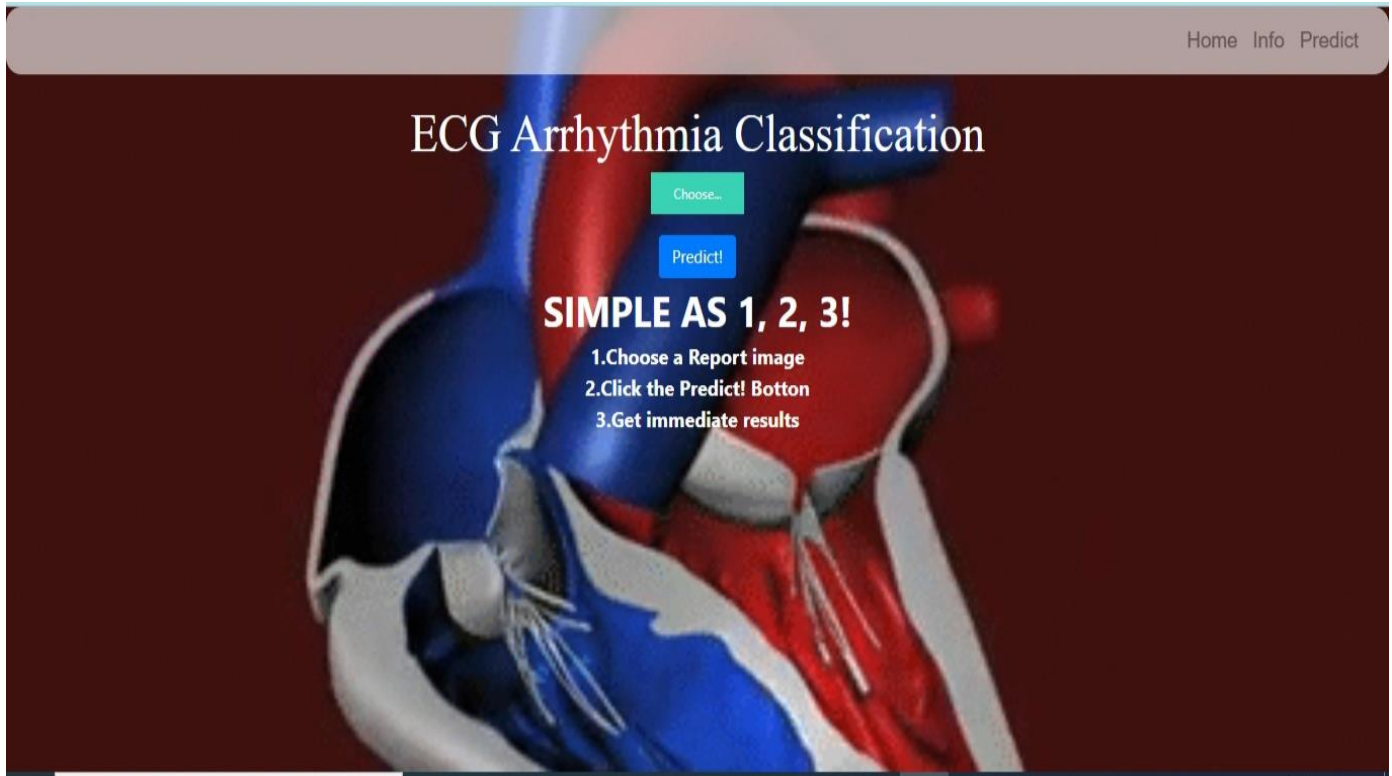
PVCs often cause no symptoms. When symptoms do occur, they feel like a flip flop or skipped beat sensation in the chest.

Most people with isolated PVCs and an otherwise



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**The prediction page will look like:**



**Upload the image and click on predict button to view the result on the "base.html" Page on the localhost.**