# VIRTUAL DOCTOR



# **BACKGROUND**

In this day and age, we know how much time and money it costs to become a healthcare professional. Perhaps because of this, they are also considered as a scarce resource, so much so that when a person picks up the phone to make an appointment with a doctor, he/she usually gets one that is a few months from now, and that is if he/she is lucky. Due to this high demand, the patient also has to let go of a few hundred dollars every time he/she goes for a check-up.

# **PROBLEM**

During an appointment, the doctor takes the patient's full history, recommends tests to be done and when these tests come back, analyses them and comes to a conclusion. As the population increases and more people turn towards easier professions, doctors are going to have to deal with an even higher patient-load, which could lead to them being

mentally stressed out. This makes them more prone to make mistakes during the hefty procedure that comes before a diagnosis. In this day and age, doesn't it make sense to automate this process, or perhaps even a part of it?

## SOLUTION

Our solution uses the test results and ultimate diagnosis of hundreds of breast cancer patients and trains a model to predict whether a new sample is the case of a benign tumor or a malignant one. Imagine the time that doctors will save when they have a tool like this nearby. The doctor will not have to rely on memory or even knowledge in order to correctly diagnose a patient. Of course this model, combined with a doctor's knowledge and experience can ultimately lead to diagnoses that are close to 100% correct.

## **FUTURE IMPROVEMENTS**

We are aiming to expand our solution to cover a multitude of diseases. We have started from Breast Cancer, but as we work on this model and fine-tune it to become highly accurate and dependable, we will be looking towards making an independent system that can cater to a wide array of medical conditions.