

The Quarantine Hackfest

By Team-Cradles

Problem Statement

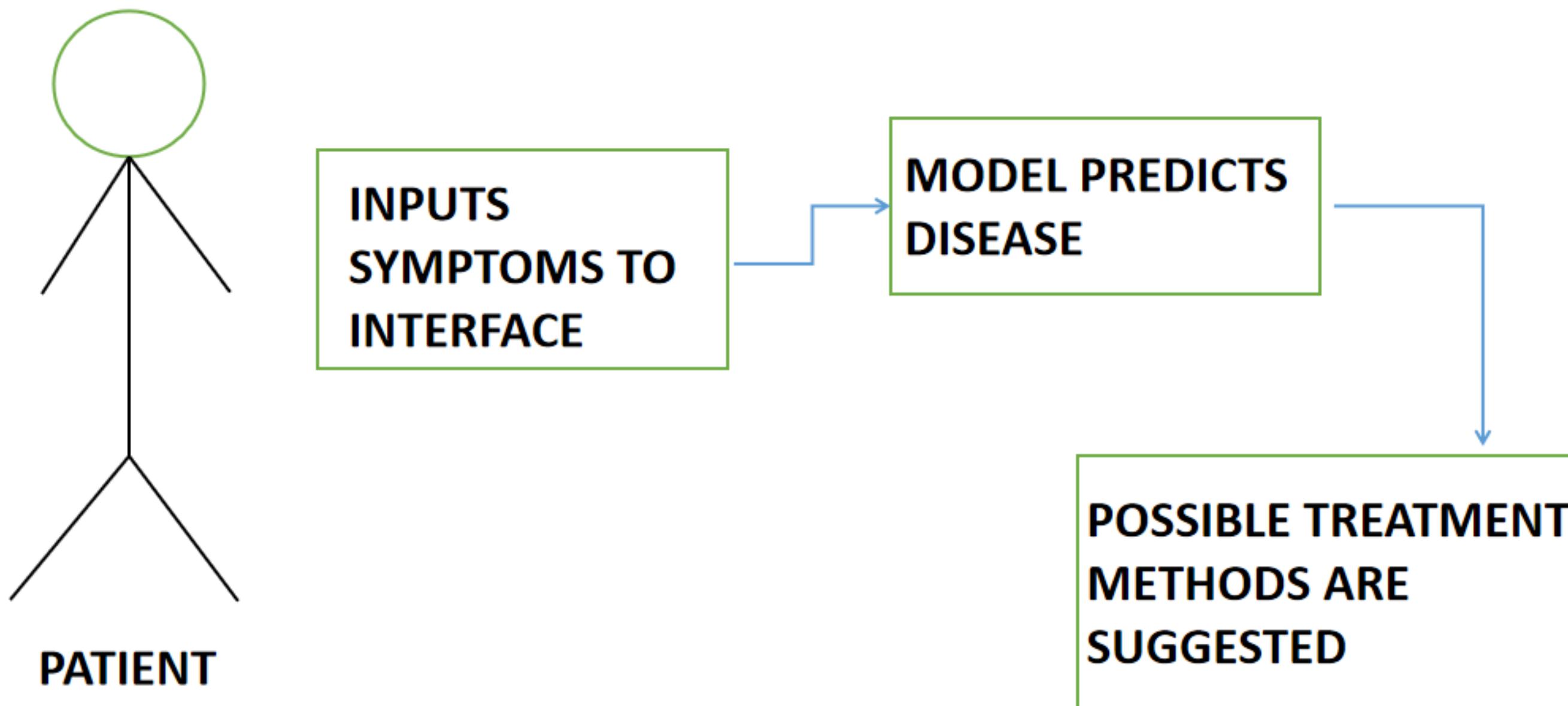
Theme: Medicine and Technology

Most of the children fear to go to the doctor and get a checkup. Even if they have pain they consider it to be normal and don't seek consultation with the doctors. Devise a method by which the gap between the patient and the doctors will become less so that detecting and curing the disease can be done at an early stage and the life of the individual can be saved.

Solution

- Providing easy diagnosis of disease to a patient at home without visiting the doctor.
- Show possible diseases the patient can have.A model is made using machine learning.
- After detection we display possible treatments.
- The patient can visit the doctor after making necessary judgements.

Principle of our idea



WHY

- The patient saves time and money by getting his diagnosis at the comfort of his home.
- They have access to medical information 24x7
- Accessibility to everyone from anywhere
- Doctors work faster
- Provides doctor patient ice-breaker

Procedure

- We are trying to make a model to show possible diseases a patient can have by giving the patients symptoms as the input to an interface. The model is made using machine learning (here we are specifically using diabetes data set downloaded from kaggle)
- We have trained a model using machine learning with the diabetes data set predicting whether a patient has diabetes or not.
- 1 is used to indicate that the patient has diabetes and 0 if he doesn't.
- After detection we display possible treatments.
- Using a web scraper the required medication is suggested.

- We have trained our model using specific data set(diabetes in this case) with the parameters blood pressure,insulin level,BMI and age.
- The accuracy of the model is 93.75%
- We have used the logistics regression algorithm.

Code Snippet

The screenshot shows a Jupyter Notebook interface with the title "Pima - Jupyter Notebook". The browser tab is "localhost:8888/notebooks/Desktop/Pima.ipynb". The notebook content is as follows:

```
In [28]: # evaluation of the given data on the basis of predicted model
In [29]: a=int(input("the bloodpressure"))
b=int(input("the insulin level"))
c=int(input("the BMI"))
d=int(input("the age"))

the bloodpressure98
the insulin level97
the BMI67
the age21

In [30]: d1 = {'bloodpressure': [a], 'insulin level': [b], 'BMI': [c], 'age': [d]}

In [31]: df=pd.DataFrame(data=d1)

In [32]: df
Out[32]:
   bloodpressure  insulin level    BMI  age
0            98           97    67   21

In [33]: prediction = log_reg.predict(df)

In [35]: prediction
# if array[0] - the user does not have diabetes
# if array[1] = the user has diabetes

Out[35]: array([1], dtype=int64)
```

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localhost:8888/notebooks/Desktop/Pima.ipynb

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In [47]:

```
for i in soup.find_all('a'):
    i=i.get('href')
    #if i[0:3] =="/wa":
    print('https://duckduckgo.com/'+i)
```

https://duckduckgo.com//
https://duckduckgo.com/appointments
https://duckduckgo.com/appointments/find-a-doctor
https://duckduckgo.com/https://jobs.mayoclinic.org/
https://duckduckgo.com/https://philanthropy.mayoclinic.org/donateMC
https://duckduckgo.com/https://onlineservices.mayoclinic.org/content/staticpatient/showpage/patientonline
https://duckduckgo.com/diseases-conditions/type-2-diabetes/in-depth/diabetes-prevention/art-20047639
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https://duckduckgo.com/https://www.youtube.com/user/mayoclinic
https://duckduckgo.com/diseases-conditions/type-2-diabetes/in-depth/diabetes-prevention/art-2004/639
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https://duckduckgo.com/https://www.mayoclinic.org/portugues
https://duckduckgo.com/ar/diseases-conditions/type-2-diabetes/in-depth/diabetes-prevention/art-20047639
https://duckduckgo.com/http://mandarin.mayoclinic.org/

In [45]:

```
import requests
```

Type here to search

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localhost:8888/notebooks/Desktop/Pima.ipynb

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In [45]:

```
import requests
import bs4
res=requests.get('https://www.mayoclinic.org/diseases-conditions/type-2-diabetes/in-depth/diabetes-prevention/art-20047639')
soup=bs4.BeautifulSoup(res.text,'lxml')
for i in soup.select('body'):
    print(i.text)
```

1. Get more physical activity

There are many benefits to regular physical activity. Exercise can help you:

Lose weight
Lower your blood sugar
Boost your sensitivity to insulin – which helps keep your blood sugar within a normal range

Research shows that aerobic exercise and resistance training can help control diabetes. The greatest benefit comes from a fitness program that includes both.

2. Get plenty of fiber

Fiber may help you:

Reduce your risk of diabetes by improving your blood sugar control
Lower your risk of heart disease

In []:

Target Market

- The old aged and those patients who don't meet doctors frequently .
- Its even for young children who are afraid of doctors.
- User friendly as it saves time and money.

Team Description

CRADLES

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Thank You