Code

Main.java

```
package main.java.sample;

import javafx.application.Application;
import javafx.fxml.FXMLLoader;
import javafx.scene.Parent;
import javafx.scene.Scene;
import javafx.scene.image.Image;
import javafx.stage.Stage;
import javafx.stage.StageStyle;

public class Main extends Application {
    double x;
    double y = 0.0D;

    public Main() {
    }

    public void start(Stage stage) throws Exception {
        Parent root =
(Parent)FXMLLoader.load(this.getClass().getResource("views/dash.fxml"));
        stage.setTitle("Covid Classifier");
        stage.initStyle(StageStyle.TRANSPARENT);
        Image image = new Image("main/java/imgs/family.png");
        root.setOnMousePressed((event) -> {
            this.x = event.getSceneX();
            this.y = event.getSceneY();
        });
        root.setOnMouseDragged((event) -> {
            stage.setX(event.getScreenX() - this.x);
            stage.setY(event.getScreenY() - this.y);
        });
        stage.setScene(new Scene(root));
        stage.getIcons().add(image);
        stage.show();
    }

    public static void main(String[] args) {
        launch(args);
```

```
    }
}
```

DashController.java

```
package main.java.sample.controllers;
// Source code recreated from a .class file by IntelliJ IDEA
// (powered by FernFlower decompiler)
//

import java.lang.Thread;

import javafx.application.Platform;
import  javafx.collections.FXCollections;
import javafx.collections.ObservableList;
import javafx.event.ActionEvent;
import javafx.fxml.FXML;
import javafx.fxml.Initializable;
import javafx.scene.Node;
import javafx.scene.chart.BarChart;
import javafx.scene.chart.LineChart;
import javafx.scene.chart.PieChart;
import javafx.scene.chart.PieChart.Data;
import javafx.scene.chart.XYChart;
import javafx.scene.control.Label;
import javafx.scene.control.TextArea;
import javafx.scene.control.TextField;
import javafx.scene.input.MouseEvent;
import javafx.scene.layout.Pane;
import javafx.scene.shape.Circle;
import javafx.scene.shape.Line;
import javafx.scene.text.Text;
import javafx.stage.Stage;
import opennlp.tools.doccat.DoccatModel;
import opennlp.tools.doccat.DocumentCategorizer;
import opennlp.tools.doccat.DocumentCategorizerME;
import opennlp.tools.namefind.NameFinderME;
import opennlp.tools.namefind.TokenNameFinderModel;
import opennlp.tools.tokenize.TokenizerME;
import opennlp.tools.tokenize.TokenizerModel;
import opennlp.tools.util.Span;
import org.apache.commons.csv.CSVFormat;
import org.apache.commons.csv.CSVRecord;
```

```
import java.io.*;
import java.net.URI;
import java.net.URL;
import java.net.http.HttpClient;
import java.net.http.HttpRequest;
import java.net.http.HttpResponse;
import java.util.Random;
import java.util.ResourceBundle;


public class DashController implements Initializable {
    public static String virusUrl1 =
"https://raw.githubusercontent.com/CSSEGISandData/COVID-
19/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_
confirmed_global.csv";
    public static String virusUrl3 =
"https://raw.githubusercontent.com/CSSEGISandData/COVID-
19/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_
deaths_global.csv";
    public static String virusUrl2 =
"https://raw.githubusercontent.com/CSSEGISandData/COVID-
19/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_
recovered_global.csv";

    static String[] anaInput;
    static double probc1,probc2,probsc1=0.0,probsc2,probsc3,probsc4;
    static boolean flag=false;

    @FXML
    private PieChart
pieSub,analysisMEC,analysisMESC,analysisPC,analysisPSC;
    @FXML
    private LineChart<String, Number> lineSub;
    @FXML
    private Label lblClose;
    @FXML
    private Label lblExpired, locations, dates, names,
analysisl1,analysisl2, analysisl3, analysisl4;
    @FXML
    public TextArea namespane1, datespane1, locationspane1, namespane2,
datespane2, locationspane2;
    @FXML
    private Label lbl7;
    @FXML
```

```
    private Label lbl30;
    @FXML
    private Label lbl90;
    @FXML
    private Label lblExp;
    @FXML
    private Label lblActive;
    @FXML
    private Label lblOffline;
    @FXML
    private Text pietext;
    @FXML
    private Line line1, line2;
    @FXML
    private Pane pane1, pane2, pane3, pane4, pane5;
    @FXML
    private Circle shpActive;
    @FXML
    private TextField maintext, maintext1;

    @FXML
    private TextArea category, subCategory;

    Random r = new Random();

    public DashController() {

    }

    public void initialize(URL location, ResourceBundle resources) {
        int ct = 100,rt=90,dt=10,c1 = 150,r1=130,d1=30,c2 =
250,r2=200,d2=50,c3 = 350,r3=290,d3=100;
        HttpClient client = HttpClient.newHttpClient();
        HttpRequest request1 =
HttpRequest.newBuilder().uri(URI.create(virusUrl1)).build();
        try {
            HttpResponse<String> httpResponse = client.send(request1,
HttpResponse.BodyHandlers.ofString());
            StringReader csvBodyReader = new
StringReader(httpResponse.body());
            Iterable<CSVRecord> records =
CSVFormat.DEFAULT.withFirstRecordAsHeader().parse(csvBodyReader);
            for (CSVRecord record : records) {
                //System.out.println(record.get("Country/Region"));
```

```
                if(record.get("Country/Region").equals("India")) {
                    String confirmedCases = (record.get(record.size()-10));
                    System.out.println("India" + confirmedCases);
                    lblActive.setText(confirmedCases + " confirmed");
                    ct=Integer.parseInt(confirmedCases);
                    c1=Integer.parseInt(record.get(record.size()-31));
                    c2=Integer.parseInt(record.get(record.size()-62));
                    c3=Integer.parseInt(record.get(record.size()-90));
                    System.out.println(ct+" "+c1+" "+c2);
                }
            }
        } catch(IOException e) {
            e.printStackTrace();
        } catch(InterruptedException e) {
            e.printStackTrace();
        }
        HttpRequest request2 =
HttpRequest.newBuilder().uri(URI.create(virusUrl2)).build();
        try {
            HttpResponse<String> httpResponse = client.send(request2,
HttpResponse.BodyHandlers.ofString());
            StringReader csvBodyReader = new
StringReader(httpResponse.body());
            Iterable<CSVRecord> records =
CSVFormat.DEFAULT.withFirstRecordAsHeader().parse(csvBodyReader);
            for (CSVRecord record : records) {
                //System.out.println(record.get("Country/Region"));
                if(record.get("Country/Region").equals("India")) {
                    String recoveredCases = (record.get(record.size()-10));
                    System.out.println("India" + recoveredCases);
                    lblOffline.setText(recoveredCases + " recovered");
                    rt=Integer.parseInt(recoveredCases);
                    r1=Integer.parseInt(record.get(record.size()-31));
                    r2=Integer.parseInt(record.get(record.size()-62));
                    r3=Integer.parseInt(record.get(record.size()-90));
                    System.out.println(rt+" "+r1+" "+r2);
                }
            }
        } catch(IOException e) {
            e.printStackTrace();
        } catch(InterruptedException e) {
            e.printStackTrace();
        }
        HttpRequest request3 =
```

```
HttpRequest.newBuilder().uri(URI.create(virusUrl3)).build();
        try {
            HttpResponse<String> httpResponse = client.send(request3,
HttpResponse.BodyHandlers.ofString());
            StringReader csvBodyReader = new
StringReader(httpResponse.body());
            Iterable<CSVRecord> records =
CSVFormat.DEFAULT.withFirstRecordAsHeader().parse(csvBodyReader);
            for (CSVRecord record : records) {
                //System.out.println(record.get("Country/Region"));
                if(record.get("Country/Region").equals("India")) {
                    String deceasedCases = (record.get(record.size()-10));
                    System.out.println("India" + deceasedCases);
                    lblExp.setText(deceasedCases + " expired");
                    dt=Integer.parseInt(deceasedCases);
                    d1=Integer.parseInt(record.get(record.size()-31));
                    d2=Integer.parseInt(record.get(record.size()-62));
                    d3=Integer.parseInt(record.get(record.size()-90));
                    System.out.println(dt+" "+d1+" "+d2);
                }
            }
        } catch(IOException e) {
            e.printStackTrace();
        } catch(InterruptedException e) {
            e.printStackTrace();
        }


        XYChart.Series<String,Number> series2 = new XYChart.Series<>();
        series2.getData().add(new XYChart.Data<>("2 months back",(c2-
c3)/100));
        series2.getData().add(new XYChart.Data<>("1 month back",(c1-
c2)/100));
        series2.getData().add(new XYChart.Data<>("This month",(ct-
c1)/100));
        series2.setName("Confirmed");

        XYChart.Series<String,Number> series3 = new XYChart.Series<>();
        series3.getData().add(new XYChart.Data<>("2 months back",(r2-
r3)/100));
        series3.getData().add(new XYChart.Data<>("1 month back",(r1-
r2)/100));
        series3.getData().add(new XYChart.Data<>("This month ",(rt-
r1)/100));
```

```
        series3.setName("Recovered");

        XYChart.Series<String,Number> series= new XYChart.Series<>();
        series.getData().add(new XYChart.Data<>("2 months back",(d2-d3)));
        series.getData().add(new XYChart.Data<>("1 month back",(d1-d2)));
        series.getData().add(new XYChart.Data<>("This month",(dt-d1)));
        series.setName("Deaths");

        lineSub.getData().addAll(series,series2,series3);
    }


    public void loadchart(PieChart P,double c,double r,double o,double s)
    {
        line1.setVisible(false);
        line2.setVisible(false);
        names.setVisible(false);
        dates.setVisible(false);
        locations.setVisible(false);
        pietext.setVisible(false);
        P.setVisible(true);

        ObservableList<PieChart.Data>
list=FXCollections.observableArrayList(
                new PieChart.Data("Statistics",s),
                new PieChart.Data("Corona",c),
                new PieChart.Data("Requests",r),
                new PieChart.Data("Offers",o)
        );
        P.setData(list);
        for(PieChart.Data data: P.getData())
        {
            int val= (int) (data.getPieValue()*10000);
            float v=(float)val/100;
            data.nameProperty().set(data.getName()+": "+v);
        }

    }

    public void loadAnalysisChart(PieChart p,double c, double o)
    {
        ObservableList<PieChart.Data>
list=FXCollections.observableArrayList(
                new PieChart.Data("Corona",c),
```

```
                new PieChart.Data("Others",o)
        );
        p.setData(list);
        for(PieChart.Data data: p.getData())
        {
            int val= (int) (data.getPieValue()*10000);
            float v=(float)val/100;
            data.nameProperty().set(data.getName()+": "+v);
        }
    }

    public void close(MouseEvent mouseEvent)
    {
        System.exit(0);
    }
    public void min(MouseEvent mouseEvent) {
        Stage s=(Stage)
((Node)mouseEvent.getSource()).getScene().getWindow();
        s.setIconified(true);
    }

    public void handle(ActionEvent actionEvent) {
        try {
            //Load Model
            analysisl1.setVisible(false);
            analysisl2.setVisible(false);

            analysisPSC.getData().clear();
            analysisMESC.getData().clear();
            analysisPC.getData().clear();
            analysisPSC.getData().clear();

            //////new thread with lambda/////
            Runnable analysisPage= () -> {
                    InputStream modelIn = null;
                    try {
                        modelIn = new
FileInputStream("C:/Users/Lenovo/Documents/en-is-covid-maxent.bin");
                    } catch (FileNotFoundException e) {
                        e.printStackTrace();
                    }
                    DoccatModel model1 = null;
                    try {
                        model1 = new DoccatModel(modelIn);
```

```
                    } catch (IOException e) {
                        e.printStackTrace();
                    }

                    DocumentCategorizer doccat1 = new
DocumentCategorizerME(model1);
                    double[] aProbs1 = doccat1.categorize(anaInput);
                    probc1=aProbs1[0];
                    probc2=aProbs1[1];
                    if(doccat1.getBestCategory(aProbs1).equals("Corona")&&
aProbs1[0]!=0.5) {
                        flag=true;
                        try {
                            modelIn = new
FileInputStream("C:/Users/Lenovo/Documents/en-covid-classifier-
maxent.bin");
                        } catch (FileNotFoundException e) {
                            e.printStackTrace();
                        }
                        DoccatModel model = null;
                        try {
                            model = new DoccatModel(modelIn);
                        } catch (IOException e) {
                            e.printStackTrace();
                        }
                        DocumentCategorizer doccat = new
DocumentCategorizerME(model);
                        double[] aProbs = doccat.categorize(anaInput);
                        probsc1=aProbs[0];
                        probsc2=aProbs[1];
                        probsc3=aProbs[2];
                        probsc4=aProbs[3];
                    }
                    else{
                        flag=false;
                    }

                };

            InputStream modelIn = new
FileInputStream("C:/Users/Lenovo/Documents/en-is-covid-percep.bin");
            DoccatModel model1 = new DoccatModel(modelIn);
            DocumentCategorizer doccat1 = new
DocumentCategorizerME(model1);
```

```
            //Taking input
            String inputString=maintext.getText();
            String tempInput=inputString;
            inputString=inputString.toLowerCase();

            String[] stopwords = {"i", "me", "my", "myself", "we", "our",
"ours", "ourselves", "you", "you're", "you've", "you'll", "you'd", "your",
"yours",
                    "yourself", "yourselves", "he", "him", "his",
"himself", "she", "she's", "her", "hers", "herself", "it", "it's", "its",
"itself",
                    "they", "them", "their", "theirs", "themselves",
"what", "which", "who", "whom", "this", "that", "that'll", "these",
"those", "am",
                    "is", "are", "was", "were", "be", "been", "being",
"have", "has", "had", "having", "do", "does", "did", "doing",
                    "a", "an", "the", "and", "but", "if", "or", "because",
"as", "until", "while", "of", "at", "by", "for",
                    "with", "about", "against", "between", "into",
"through", "during", "before", "after", "above", "below", "to", "from",
"up", "down",
                    "in", "out", "on", "off", "over", "under", "again",
"further", "then", "once", "here", "there", "when", "where", "why",
                    "how", "all", "any", "both", "each", "few", "more",
"most", "other", "some", "such", "no", "nor", "not", "only",
                    "own", "same", "so", "than", "too", "very", "s", "t",
"can", "will", "just", "don", "don't", "should", "should've",
                    "now", "d", "ll", "m", "o", "re", "ve", "y", "ain",
"aren", "aren't", "couldn", "couldn't", "didn", "didn't",
                    "doesn", "doesn't", "hadn", "hadn't", "hasn", "hasn't",
"haven", "haven't", "isn", "isn't", "ma", "mightn", "mightn't", "mustn",
"mustn't",
                    "shan", "shan't", "shouldn", "shouldn't", "wasn",
"wasn't", "weren", "weren't", "won", "won't", "wouldn", "wouldn't"};

            for(int i=0;i< stopwords.length;i++) {
                inputString = inputString.replaceAll(" " + stopwords[i] + "
", " ");
            }
            System.out.println(inputString);
            String[] docWords1 = inputString.split(" ");
```

```
            double[] aProbs1 = doccat1.categorize(docWords1);
            System.out.println(doccat1.getCategory(0) + " : " + aProbs1[0]
+ " : " + doccat1.getCategory(1) + " : " + aProbs1[1] + " : " +
doccat1.getBestCategory(aProbs1) + " : " +
doccat1.getBestCategory(aProbs1).equals("Corona"));

            loadAnalysisChart(analysisPC,aProbs1[0],aProbs1[1]);

            ///////Starting an new Thread/////////
            anaInput=docWords1;
            Thread t=new Thread(analysisPage);
            t.start();
            t.join();
            loadAnalysisChart(analysisMEC,probc1,probc2);

            if(flag==true)
            {
                analysisl3.setVisible(false);
                loadchart(analysisMESC,probsc1,probsc2,probsc3,probsc4);
            }
            else{
                analysisl3.setVisible(true);
                analysisMESC.setVisible(false);
                analysisl3.setText("This will display only when category is
covid.");
            }

            if(doccat1.getBestCategory(aProbs1).equals("Corona")&&
aProbs1[0]!=0.5) {

                //Load the model
                namespane1.setVisible(false);
                datespane1.setVisible(false);
                locationspane1.setVisible(false);
                line1.setVisible(false);
                line2.setVisible(false);
                dates.setVisible(false);
                locations.setVisible(false);
                lineSub.setVisible(true);
                category.setText("COVID");
                analysisl4.setVisible(false);
                modelIn = new
FileInputStream("C:/Users/Lenovo/Documents/en-covid-category-percep.bin");
                DoccatModel model = new DoccatModel(modelIn);
```

```
                DocumentCategorizer doccat = new
DocumentCategorizerME(model);

                // test the model file by subjecting it to prediction
                String[] docWords = inputString.replaceAll("[^A-Za-z]", "
").split(" ");
                double[] aProbs = doccat.categorize(docWords);

                // print the probabilities of the categories
                double c,r,o,s;
                System.out.println("\n--------------------------------
\nCategory : Probability\n---------------------------------");
                for (int i = 0; i < doccat.getNumberOfCategories(); i++) {
                    System.out.println(doccat.getCategory(i) + " : " +
aProbs[i]);
                }
                c=aProbs[0];
                r=aProbs[1];
                o=aProbs[2];
                s=aProbs[3];
                loadchart(pieSub,c,r,o,s);
                loadchart(analysisPSC,c,r,o,s);
                System.out.println("---------------------------------");
                double a = 0, b = 0;
                int p = 0, q = 0;
                for (int i = 0; i < doccat.getNumberOfCategories(); i++) {
                    if (aProbs[i] > b) {
                        b = aProbs[i];
                        q = i;
                    }
                    if (aProbs[i] < b && a < aProbs[i]) {
                        a = aProbs[i];
                        p = i;
                    }
                }
                if (doccat.getBestCategory(aProbs) == "Corona") {
                    System.out.println("\n" +
doccat.getBestCategory(aProbs) + " : is the predicted category for the
given text.");
                    System.out.println("\n" + doccat.getCategory(p) + " :
is the predicted sub-category for the given text.");
                    subCategory.setText(doccat.getCategory(p));
                } else {
                    System.out.println("\n" + "Corona" + " : is the
```

```
predicted category for the given text.");
                    System.out.println("\n" + doccat.getCategory(q) + " :
is the predicted sub-category for the given text.");
                    subCategory.setText(doccat.getCategory(q));
                }
            }
            else
            {

                analysisl4.setVisible(true);
                category.setText("NON-COVID");
                subCategory.setText("NONE");
                lineSub.setVisible(false);
                pieSub.setVisible(false);
                pietext.setVisible(false);
                namespane1.setVisible(true);
                datespane1.setVisible(true);
                locationspane1.setVisible(true);
                line1.setVisible(true);
                line2.setVisible(true);
                dates.setVisible(true);
                locations.setVisible(true);
                names.setVisible(true);
                names.setText("Names");

                analysisPSC.setVisible(false);
                analysisl4.setText("This will display only when category is
covid.");
                nlp(tempInput,namespane1,datespane1, locationspane1);

            }
        } catch (IOException | InterruptedException e) {
            System.out.println("An exception in reading the training file.
Please check.");
            e.printStackTrace();
        }
    }


    private void initialize() {

    }

    public void page1(ActionEvent actionEvent) {
```

```
        pane1.setVisible(true);
        pane2.setVisible(false);
        pane3.setVisible(false);
        pane4.setVisible(false);
        pane5.setVisible(false);
    }

    public void page2(ActionEvent actionEvent) {
        pane1.setVisible(false);
        pane2.setVisible(true);
        pane3.setVisible(false);
        pane4.setVisible(false);
        pane5.setVisible(false);
    }

    public void page3(ActionEvent actionEvent) {
        pane1.setVisible(false);
        pane2.setVisible(false);
        pane3.setVisible(true);
        pane4.setVisible(false);
        pane5.setVisible(false);
    }

    public void page4(ActionEvent actionEvent) {
        pane1.setVisible(false);
        pane2.setVisible(false);
        pane3.setVisible(false);
        pane4.setVisible(true);
        pane5.setVisible(false);
    }
    public void page5(ActionEvent actionEvent) {
        pane1.setVisible(false);
        pane2.setVisible(false);
        pane3.setVisible(false);
        pane4.setVisible(false);
        pane5.setVisible(true);
    }


    public void handlenpl(ActionEvent actionEvent) throws IOException {
        nlp(maintext1.getText(),namespane2,datespane2,locationspane2);
    }
    public void nlp(String tempInput,TextArea namespane,TextArea datespane,
TextArea locationspane) throws IOException {
```

```
        InputStream inputStreamTokenizer = new

FileInputStream("C:/Users/Lenovo/Documents/OpenNLP_models/en-token.bin");
        TokenizerModel tokenModel = new
TokenizerModel(inputStreamTokenizer);
        //Instantiating the TokenizerME class
        TokenizerME tokenizer = new TokenizerME(tokenModel);
        //Tokenizing the sentence in to a string array
        String tokens[] = tokenizer.tokenize(tempInput);
        NlpName namesFind=new
NlpName("C:/Users/Lenovo/Documents/OpenNLP_models/en-ner-
person.bin",tokens);
        String names[]=namesFind.execute(tokens);
        String str="";
        for(String s:names)
        {
            str=str+s+"\n";
        }
        namespane.setText(str);

        ////////////////LOCATION//////////////////
        NlpLocation locationFind=new
NlpLocation("C:/Users/Lenovo/Documents/OpenNLP_models/en-ner-
location.bin",tokens);
        String location[]=locationFind.execute(tokens);
        str="";
        for(String s:location)
        {
            str=str+s+"\n";
        }
        locationspane.setText(str);
        ////////////////////DATE//////////////////
        NlpDate dateFind=new
NlpDate("C:/Users/Lenovo/Documents/OpenNLP_models/en-ner-date.bin",tokens);
        String dates[]=dateFind.execute(tokens);
        str="";
        for(String s:dates)
        {
            str=str+s+"\n";
        }
        datespane.setText(str);
    }
}
```

```
interface Othersnlp{
    public String[] execute(String tokens[]);
}

class OthersNlpTemplate implements  Othersnlp{
    private InputStream inputStreamNameFinder;
    private TokenNameFinderModel model;
    public Span nameSpans[];
    private NameFinderME nameFinder;
    OthersNlpTemplate(String path,String tokens[]) throws IOException {
        inputStreamNameFinder = new FileInputStream(path);
        model = new TokenNameFinderModel(inputStreamNameFinder);
        nameFinder = new NameFinderME(model);
        nameSpans = nameFinder.find(tokens);
    }
    public String[] execute(String tokens[])
    {
        String str[] = new String[0];
        for(Span s: nameSpans)
            System.out.println(s.toString()+"  "+tokens[s.getStart()]);
        return str;
    }
}

class NlpName extends OthersNlpTemplate{
    NlpName(String path,String tokens[]) throws IOException {
        super(path,tokens);
    }
    public String[] execute(String tokens[])
    {
        String str[];
        if(nameSpans.length==0)
            str=new String[1];
        else
            str=new String[nameSpans.length];
        int i=0;
        System.out.println("\nAll the person names present in the given
text are:");
        for(Span s: nameSpans) {
            str[i]=s.toString() + "  " + tokens[s.getStart()];
            i++;
            System.out.println(s.toString() + "  " + tokens[s.getStart()]);
        }
```

```
        if(i==0)
        {
            str[i]="<---None--->";
            System.out.println("<---None--->");
        }
        return str;
    }
}

class NlpLocation extends OthersNlpTemplate{
    NlpLocation(String path,String tokens[]) throws IOException {
        super(path,tokens);
    }
    public String[] execute(String tokens[])
    {
        String str[];
        if(nameSpans.length==0)
            str=new String[1];
        else
            str=new String[nameSpans.length];
        int i=0;
        System.out.println("\nAll the Locations present in the given text
are:");
        for(Span s: nameSpans) {
            str[i]=s.toString() + "  " + tokens[s.getStart()];
            System.out.println(s.toString() + "  " + tokens[s.getStart()]);
            i++;
        }
        if(i==0)
        {
            str[i]="<---None--->";
            System.out.println("<---None--->");
        }
        return str;
    }
}

class NlpDate extends OthersNlpTemplate {
    NlpDate(String path,String tokens[]) throws IOException {
        super(path,tokens);
    }
    public String[] execute(String tokens[])
    {
        String str[];
```

```
        if(nameSpans.length==0)
            str=new String[1];
        else
            str=new String[nameSpans.length];
        int i=0;
        System.out.println("\nAll the Dates present in the given text
are:");
        for(Span s: nameSpans)
        {
            str[i]=s.toString() + "  " + tokens[s.getStart()];
            System.out.println(s.toString()+"  "+tokens[s.getStart()]);
            i++;
        }
        if(i==0)
        {
            str[i]="<---None--->";
            System.out.println("<---None--->");
        }
        return str;
    }
}
```

Model Trainer

```
import java.io.BufferedOutputStream;
import java.io.File;
import java.io.FileOutputStream;
import java.io.IOException;

import opennlp.tools.doccat.DoccatFactory;
import opennlp.tools.doccat.DoccatModel;
import opennlp.tools.doccat.DocumentCategorizerME;
import opennlp.tools.doccat.DocumentSampleStream;
import opennlp.tools.util.InputStreamFactory;
import opennlp.tools.util.MarkableFileInputStreamFactory;
import opennlp.tools.util.ObjectStream;
import opennlp.tools.util.PlainTextByLineStream;
import opennlp.tools.util.TrainingParameters;

public class ClassifierTrainer {
    static DoccatModel model;
    public static void main(String[] args) {
        try {
            // read the training data
```

```
            InputStreamFactory dataIn = new
MarkableFileInputStreamFactory(new File("C:/Users/Lenovo/Documents/en-
covid-category.train"));
            ObjectStream lineStream = new PlainTextByLineStream(dataIn,
"UTF-8");
            ObjectStream sampleStream = new
DocumentSampleStream(lineStream);
            // define the training parameters
            TrainingParameters params = new TrainingParameters();
            params.put(TrainingParameters.ITERATIONS_PARAM, 10+"");
            params.put(TrainingParameters.CUTOFF_PARAM, 0+"");

            // create a model from training data
            model = DocumentCategorizerME.train("en", sampleStream, params,
new DoccatFactory());
            System.out.println("\nModel is successfully trained.");

            // save the model to local
            BufferedOutputStream modelOut = new BufferedOutputStream(new
FileOutputStream("C:/Users/Lenovo/Documents/en-covid-classifier-
maxent.bin"));
            model.serialize(modelOut);
            System.out.println("\nTrained Model is saved locally at :
C:/Users/Lenovo/Documents/en-covid-classifier-maxent.bin");
            System.out.println(model);
        }
            catch (IOException e) {
                System.out.println("An exception in reading the training
file. Please check.");
                e.printStackTrace();
        }
    }
}
```

dash.fxml

```
<?xml version="1.0" encoding="UTF-8"?>

<?import javafx.geometry.Insets?>
<?import javafx.scene.chart.CategoryAxis?>
<?import javafx.scene.chart.LineChart?>
<?import javafx.scene.chart.NumberAxis?>
<?import javafx.scene.chart.PieChart?>
<?import javafx.scene.control.Button?>
```

```
<?import javafx.scene.control.Label?>
<?import javafx.scene.control.TextArea?>
<?import javafx.scene.control.TextField?>
<?import javafx.scene.image.Image?>
<?import javafx.scene.image.ImageView?>
<?import javafx.scene.layout.AnchorPane?>
<?import javafx.scene.layout.Pane?>
<?import javafx.scene.layout.VBox?>
<?import javafx.scene.shape.Circle?>
<?import javafx.scene.shape.Line?>
<?import javafx.scene.text.Font?>
<?import javafx.scene.text.Text?>

<AnchorPane maxHeight="-Infinity" maxWidth="-Infinity" minHeight="-
Infinity" minWidth="-Infinity" prefHeight="530.0" prefWidth="957.0"
style="-fx-border-radius: 20; -fx-background-radius: 20;"
xmlns="http://javafx.com/javafx/16" xmlns:fx="http://javafx.com/fxml/1"
fx:controller="main.java.sample.controllers.DashController">
   <children>
      <Pane prefHeight="530.0" prefWidth="965.0" style="-fx-background-
color: #FFF; -fx-background-radius: 20;">
         <children>
            <VBox prefHeight="530.0" prefWidth="207.0" style="-fx-
background-color: #E5E5E5;">
               <children>
                  <ImageView fitHeight="144.0" fitWidth="221.0"
pickOnBounds="true" preserveRatio="true">
                     <image>
                        <Image url="@../../imgs/logonew.jpg" />
                     </image>
                  </ImageView>
                  <Button alignment="BASELINE_LEFT" graphicTextGap="10.0"
mnemonicParsing="false" onAction="#page1" prefHeight="37.0"
prefWidth="210.0" style="-fx-cursor: hand;"
stylesheets="@../utils/fullpackstyling.css" text="Covid Classifer">
                     <padding>
                        <Insets left="40.0" />
                     </padding>
                     <graphic>
                        <ImageView fitHeight="20.0" fitWidth="26.0"
pickOnBounds="true" preserveRatio="true">
                           <image>
                              <Image
url="@../../imgs/icons8_details_24px_3.png" />
```

```
                           </image>
                        </ImageView>
                     </graphic>
                  </Button>
                  <Button alignment="BASELINE_LEFT" graphicTextGap="10.0"
layoutX="10.0" layoutY="10.0" mnemonicParsing="false" onAction="#page2"
prefHeight="37.0" prefWidth="210.0" style="-fx-cursor: hand;"
stylesheets="@../utils/fullpackstyling.css" text="Extract Info">
                     <VBox.margin>
                        <Insets />
                     </VBox.margin>
                     <padding>
                        <Insets left="40.0" />
                     </padding>
                     <graphic>
                        <ImageView fitHeight="20.0" fitWidth="26.0"
pickOnBounds="true" preserveRatio="true">
                           <image>
                              <Image
url="@../../imgs/icons8_compass_24px_1.png" />
                           </image>
                        </ImageView>
                     </graphic>
                  </Button>
                  <Button alignment="BASELINE_LEFT" graphicTextGap="10.0"
layoutX="10.0" layoutY="173.0" mnemonicParsing="false" onAction="#page5"
prefHeight="37.0" prefWidth="210.0" style="-fx-cursor: hand;"
stylesheets="@../utils/fullpackstyling.css" text="Comparison">
                     <padding>
                        <Insets left="40.0" />
                     </padding>
                     <graphic>
                        <ImageView fitHeight="20.0" fitWidth="26.0"
pickOnBounds="true" preserveRatio="true">
                           <image>
                              <Image url="@../../imgs/icons8-increase-
profits-96.png" />
                           </image>
                        </ImageView>
                     </graphic>
                  </Button>
                  <Button alignment="BASELINE_LEFT" graphicTextGap="10.0"
layoutX="10.0" layoutY="47.0" mnemonicParsing="false" onAction="#page3"
prefHeight="37.0" prefWidth="210.0" style="-fx-cursor: hand;"
```

```
stylesheets="@../utils/fullpackstyling.css" text="How it works?">
                     <VBox.margin>
                        <Insets />
                     </VBox.margin>
                     <padding>
                        <Insets left="40.0" />
                     </padding>
                     <graphic>
                        <ImageView fitHeight="20.0" fitWidth="26.0"
pickOnBounds="true" preserveRatio="true">
                           <image>
                              <Image
url="@../../imgs/icons8_settings_32px.png" />
                           </image>
                        </ImageView>
                     </graphic>
                  </Button>
                  <Button alignment="BASELINE_LEFT" graphicTextGap="10.0"
layoutX="10.0" layoutY="84.0" mnemonicParsing="false" onAction="#page4"
prefHeight="37.0" prefWidth="210.0" style="-fx-cursor: hand;"
stylesheets="@../utils/fullpackstyling.css" text="About us">
                     <VBox.margin>
                        <Insets />
                     </VBox.margin>
                     <padding>
                        <Insets left="40.0" />
                     </padding>
                     <graphic>
                        <ImageView fitHeight="20.0" fitWidth="26.0"
pickOnBounds="true" preserveRatio="true">
                           <image>
                              <Image url="@../../imgs/about-us.png" />
                           </image>
                        </ImageView>
                     </graphic>
                  </Button>
                  <Pane prefHeight="254.0" prefWidth="221.0" style="-fx-
background-radius: 20; -fx-border-radius: 20;">
                     <children>
                        <Circle fx:id="shpActive" fill="WHITE"
layoutX="53.0" layoutY="87.0" radius="7.0" stroke="#1cd95c"
strokeType="INSIDE" />
                        <Circle fill="WHITE" layoutX="53.0" layoutY="120.0"
radius="7.0" stroke="#d9c81c" strokeType="INSIDE" />
```

```
                        <Circle fill="WHITE" layoutX="53.0" layoutY="149.0"
radius="7.0" stroke="#da1c1c" strokeType="INSIDE" />
                        <Line endX="-4.0" endY="-8.0" layoutX="34.0"
layoutY="43.0" startX="148.0" startY="-8.0" stroke="#ddd1d1" />
                        <Label fx:id="lblActive" layoutX="76.0"
layoutY="79.0" text="10 Active" textFill="#4a4747">
                           <font>
                              <Font size="11.0" />
                           </font>
                        </Label>
                        <Label fx:id="lblOffline" layoutX="78.0"
layoutY="112.0" text="2 Offline" textFill="#4a4747">
                           <font>
                              <Font size="11.0" />
                           </font>
                        </Label>
                        <Label fx:id="lblExp" layoutX="77.0"
layoutY="141.0" text="8 Expired" textFill="#4a4747">
                           <font>
                              <Font size="11.0" />
                           </font>
                        </Label>
                        <Label layoutX="36.0" layoutY="43.0"
prefHeight="28.0" prefWidth="210.0" text="India Covid Stats"
underline="true">
                           <font>
                              <Font name="Consolas" size="14.0" />
                           </font>
                        </Label>
                     </children>
                  </Pane>
               </children>
            </VBox>
            <Pane fx:id="pane1" layoutX="203.0" prefHeight="530.0"
prefWidth="754.0" style="-fx-background-color: #fff; -fx-background-radius:
20;">
               <children>
                  <Line endX="598.0" endY="0.5" layoutX="133.0"
layoutY="302.0" startX="-98.5" startY="0.5" stroke="#ddd1d1" />
                  <Line fx:id="line1" endX="3.0" endY="-8.0"
layoutX="271.0" layoutY="312.0" startX="3.0" startY="147.29290771484375"
stroke="#ddd1d1" visible="false" />
                  <Label fx:id="names" layoutX="34.0" layoutY="308.0"
text="Names" textFill="#383839" visible="false">
```

```
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Label fx:id="dates" layoutX="288.0" layoutY="308.0"
text="Dates" textFill="#383839" visible="false">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Label fx:id="locations" layoutX="548.0" layoutY="308.0"
text="Locations" textFill="#383839" visible="false">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Line fx:id="line2" endX="3.0" endY="-8.0"
layoutX="518.0" layoutY="312.0" startX="3.0" startY="147.29290771484375"
stroke="#ddd1d1" visible="false" />
                  <Label layoutX="33.0" layoutY="48.0" text="This
application allows you to check whether the given text is related to COVID-
19 or not." textFill="#383839" underline="true">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Circle fill="#f94344" layoutX="732.0" layoutY="22.0"
onMouseClicked="#close" radius="14.0" stroke="BLACK" strokeType="INSIDE" />
                  <Label fx:id="lblClose" alignment="CENTER"
layoutX="718.0" layoutY="14.0" onMouseClicked="#close" prefHeight="17.0"
prefWidth="28.0" style="-fx-cursor: hand;" text="X" textFill="WHITE">
                     <font>
                        <Font name="System Bold" size="12.0" />
                     </font>
                  </Label>
                  <Circle fill="#29ff1f" layoutX="689.0" layoutY="22.0"
onMouseClicked="#min" radius="14.0" stroke="#070707" strokeType="INSIDE" />
                  <Label layoutX="683.0" layoutY="-13.0"
onMouseClicked="#min" style="-fx-cursor: hand;" text="_">
                     <font>
                        <Font size="29.0" />
                     </font>
                  </Label>
                  <TextField fx:id="maintext" layoutX="34.0" layoutY="90.0"
```

```
onAction="#handle" prefHeight="37.0" prefWidth="414.0" promptText="Enter
Text to be classified" style="-fx-cursor: text;" />
                  <Button layoutX="34.0" layoutY="143.0"
mnemonicParsing="false" onAction="#handle" prefHeight="28.0"
prefWidth="100.0" style="-fx-cursor: hand;" text="Classify">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></Button>
                  <TextArea fx:id="category" editable="false"
layoutX="41.0" layoutY="193.0" minHeight="72.0" minWidth="200.0"
nodeOrientation="LEFT_TO_RIGHT" prefHeight="72.0" prefWidth="272.0"
promptText="Category will appear here">
                     <font>
                        <Font name="Consolas Bold" size="41.0" />
                     </font>
                  </TextArea>
                  <TextArea fx:id="subCategory" editable="false"
layoutX="320.0" layoutY="204.0" prefHeight="30.0" prefWidth="180.0"
promptText="Sub-Category">
                     <font>
                        <Font name="Consolas" size="20.0" />
                     </font></TextArea>
                  <Text layoutX="370.0" layoutY="276.0"
strokeType="OUTSIDE" strokeWidth="0.0" text="Sub-Category" />
                  <Text layoutX="150.0" layoutY="283.0"
strokeType="OUTSIDE" strokeWidth="0.0" text="Category" />
                  <PieChart fx:id="pieSub" layoutX="469.0" layoutY="71.0"
prefHeight="216.0" prefWidth="293.0" title="Probabilities" />
                  <Text fx:id="pietext" layoutX="548.0" layoutY="183.0"
strokeType="OUTSIDE" strokeWidth="0.0" text="Pie Chart will display here"
/>
                  <TextArea fx:id="namespane1" editable="false"
layoutX="34.0" layoutY="333.0" prefHeight="181.0" prefWidth="200.0"
visible="false">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></TextArea>
                  <TextArea fx:id="datespane1" editable="false"
layoutX="288.0" layoutY="332.0" prefHeight="181.0" prefWidth="200.0"
visible="false">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></TextArea>
                  <TextArea fx:id="locationspane1" editable="false"
```

```
layoutX="548.0" layoutY="333.0" prefHeight="181.0" prefWidth="187.0"
visible="false">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></TextArea>
                  <LineChart fx:id="lineSub" layoutX="8.0" layoutY="302.0"
prefHeight="222.0" prefWidth="723.0">
                    <xAxis>
                      <CategoryAxis side="BOTTOM" />
                    </xAxis>
                    <yAxis>
                      <NumberAxis side="LEFT" />
                    </yAxis>
                  </LineChart>
               </children>
            </Pane>
            <Pane fx:id="pane2" layoutX="203.0" prefHeight="530.0"
prefWidth="778.0" style="-fx-background-color: #fff; -fx-background-radius:
20;" visible="false">
               <children>
                  <Line endX="598.0" endY="0.5" layoutX="134.0"
layoutY="264.0" startX="-98.5" startY="0.5" stroke="#ddd1d1" />
                  <Line endX="3.0" endY="-8.0" layoutX="270.0"
layoutY="274.0" startX="3.0" startY="147.29290771484375" stroke="#ddd1d1"
/>
                  <Label layoutX="33.0" layoutY="275.0" text="Names"
textFill="#383839">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Label layoutX="288.0" layoutY="275.0" text="Dates"
textFill="#383839">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Label layoutX="545.0" layoutY="275.0" text="Locations"
textFill="#383839">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Line endX="3.0" endY="-8.0" layoutX="518.0"
```

```
layoutY="274.0" startX="3.0" startY="147.29290771484375" stroke="#ddd1d1"
/>
                  <Label layoutX="33.0" layoutY="48.0" text="You can
extract useful information from the text like Names, Dates, Locatons"
textFill="#383839" underline="true">
                     <font>
                        <Font name="System Bold" size="16.0" />
                     </font>
                  </Label>
                  <Circle fill="#f94344" layoutX="732.0" layoutY="22.0"
radius="14.0" stroke="BLACK" strokeType="INSIDE" />
                  <Circle fill="WHITE" layoutX="639.0" layoutY="425.0"
radius="10.0" stroke="WHITE" strokeType="INSIDE" />
                  <Label fx:id="lblClose1" alignment="CENTER"
layoutX="718.0" layoutY="14.0" onMouseClicked="#close" prefHeight="17.0"
prefWidth="28.0" style="-fx-cursor: hand;" text="X" textFill="WHITE">
                     <font>
                        <Font name="System Bold" size="12.0" />
                     </font>
                  </Label>
                  <Circle fill="#29ff1f" layoutX="689.0" layoutY="22.0"
radius="14.0" stroke="#070707" strokeType="INSIDE" />
                  <Label layoutX="683.0" layoutY="-13.0"
onMouseClicked="#min" style="-fx-cursor: hand;" text="_">
                     <font>
                        <Font size="29.0" />
                     </font>
                  </Label>
                  <TextField fx:id="maintext1" layoutX="34.0"
layoutY="90.0" onAction="#handlenpl" prefHeight="37.0" prefWidth="414.0"
promptText="Enter Text to extract information" style="-fx-cursor: text;" />
                  <Button layoutX="34.0" layoutY="143.0"
mnemonicParsing="false" onAction="#handlenpl" prefHeight="28.0"
prefWidth="100.0" style="-fx-cursor: hand;" text="Extract">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font>
                  </Button>
                  <TextArea fx:id="namespane2" editable="false"
layoutX="34.0" layoutY="300.0" prefHeight="200.0" prefWidth="200.0"
promptText="Names will appear here">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></TextArea>
```

```
                  <TextArea fx:id="datespane2" editable="false"
layoutX="285.0" layoutY="300.0" prefHeight="200.0" prefWidth="200.0"
promptText="Dates will appear here">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></TextArea>
                  <TextArea fx:id="locationspane2" editable="false"
layoutX="539.0" layoutY="300.0" prefHeight="200.0" prefWidth="200.0"
promptText="Location will appeat here">
                     <font>
                        <Font name="Consolas" size="12.0" />
                     </font></TextArea>
               </children>
            </Pane>
            <Pane fx:id="pane3" layoutX="203.0" prefHeight="530.0"
prefWidth="788.0" style="-fx-background-color: #fff; -fx-background-radius:
20;" visible="false">
               <children>
                  <Circle fill="#f94344" layoutX="732.0" layoutY="22.0"
radius="14.0" stroke="BLACK" strokeType="INSIDE" />
                  <Circle fill="WHITE" layoutX="639.0" layoutY="425.0"
radius="10.0" stroke="WHITE" strokeType="INSIDE" />
                  <Label fx:id="lblClose11" alignment="CENTER"
layoutX="718.0" layoutY="14.0" onMouseClicked="#close" prefHeight="17.0"
prefWidth="28.0" style="-fx-cursor: hand;" text="X" textFill="WHITE">
                     <font>
                        <Font name="System Bold" size="12.0" />
                     </font>
                  </Label>
                  <Circle fill="#29ff1f" layoutX="689.0" layoutY="22.0"
radius="14.0" stroke="#070707" strokeType="INSIDE" />
                  <Label layoutX="683.0" layoutY="-13.0"
onMouseClicked="#min" style="-fx-cursor: hand;" text="_">
                     <font>
                        <Font size="29.0" />
                     </font>
                  </Label>
                  <TextArea fx:id="howTo" editable="false" layoutY="46.0"
prefHeight="484.0" prefWidth="754.0" text="                        How this
application works?&#10;&#10;1. Covid Classifier: Available on the left pane
is used to classify input text as covid or non-covid. If it falls in covid
category, it is further classified as either of general Corona, Request,
Offer or Statistics. Graphical representation of probabilities of sub -
categories is also displayed. If the text falls in non-covid category,
```

```
important information like Location, Names and Dates from the inputted text are displayed.&#10;2.  Extract Info: Extracts and prints important information like Location, Names and Dates from the inputted text.&#10;3. How it works?: It is a guide on how this application works.&#10;4. About us: This section provides information about the developers of this application.&#10;5. The bottom part of the left pane contains real-time Covid related data of India.&#10;6. The application has Minimise and Close button on top right side of the screen." wrapText="true">
                     <font>
                        <Font name="Consolas" size="16.0" />
                     </font>
                  </TextArea>
               </children>
            </Pane>
            <Pane fx:id="pane4" layoutX="205.0" prefHeight="530.0" prefWidth="810.0" style="-fx-background-color: #fff; -fx-background-radius: 20;" visible="false">
               <children>
                  <Circle fill="#f94344" layoutX="732.0" layoutY="22.0" radius="14.0" stroke="BLACK" strokeType="INSIDE" />
                  <Circle fill="WHITE" layoutX="639.0" layoutY="425.0" radius="10.0" stroke="WHITE" strokeType="INSIDE" />
                  <Label fx:id="lblClose111" alignment="CENTER" layoutX="718.0" layoutY="14.0" onMouseClicked="#close" prefHeight="17.0" prefWidth="28.0" style="-fx-cursor: hand;" text="X" textFill="WHITE">
                     <font>
                        <Font name="System Bold" size="12.0" />
                     </font>
                  </Label>
                  <Circle fill="#29ff1f" layoutX="689.0" layoutY="22.0" radius="14.0" stroke="#070707" strokeType="INSIDE" />
                  <Label layoutX="683.0" layoutY="-13.0" onMouseClicked="#min" style="-fx-cursor: hand;" text="_">
                     <font>
                        <Font size="29.0" />
                     </font>
                  </Label>
                  <TextField fx:id="aboutUs" alignment="CENTER" editable="false" layoutX="236.0" layoutY="66.0" text="About Us">
                     <font>
                        <Font name="System Bold" size="20.0" />
                     </font>
                  </TextField>
                  <TextArea fx:id="aboutUsDetails" editable="false"
```

```
layoutX="37.0" layoutY="134.0" prefHeight="335.0" prefWidth="664.0"
text="This project is developed by below mentioned 4th semester Information
Science and Engineering students of R V College of Engineering as a part of
Object Oriented Programming in Java course.&#10;1. Sahil Sharma -
1RV19IS046&#10;2. Shivam Prajapati - 1RV19IS049" wrapText="true">
                     <font>
                        <Font name="Consolas" size="16.0" />
                     </font>
                  </TextArea>
               </children>
            </Pane>
            <Pane fx:id="pane5" layoutX="203.0" prefHeight="530.0"
prefWidth="810.0" style="-fx-background-color: #fff; -fx-background-radius:
20;" visible="false">
               <children>
                  <Circle fill="#f94344" layoutX="732.0" layoutY="22.0"
radius="14.0" stroke="BLACK" strokeType="INSIDE" />
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radius="10.0" stroke="WHITE" strokeType="INSIDE" />
                  <Label fx:id="lblClose1111" alignment="CENTER"
layoutX="718.0" layoutY="14.0" onMouseClicked="#close" prefHeight="17.0"
prefWidth="28.0" style="-fx-cursor: hand;" text="X" textFill="WHITE">
                     <font>
                        <Font name="System Bold" size="12.0" />
                     </font>
                  </Label>
                  <Circle fill="#29ff1f" layoutX="689.0" layoutY="22.0"
radius="14.0" stroke="#070707" strokeType="INSIDE" />
                  <Label layoutX="683.0" layoutY="-13.0"
onMouseClicked="#min" style="-fx-cursor: hand;" text="_">
                     <font>
                        <Font size="29.0" />
                     </font>
                  </Label>
                  <Label layoutX="27.0" layoutY="36.0" text="-&gt;
Comparison of ML model using different algorithms" underline="true">
                     <font>
                        <Font name="Consolas" size="14.0" />
                     </font>
                  </Label>
                  <Line endX="-100.0" endY="382.0" layoutX="490.0"
layoutY="147.0" startX="-100.0" startY="-76.33333587646484"
stroke="#ddd1d1" />
                  <Line endX="552.3333740234375" endY="-7.62939453125E-6"
```
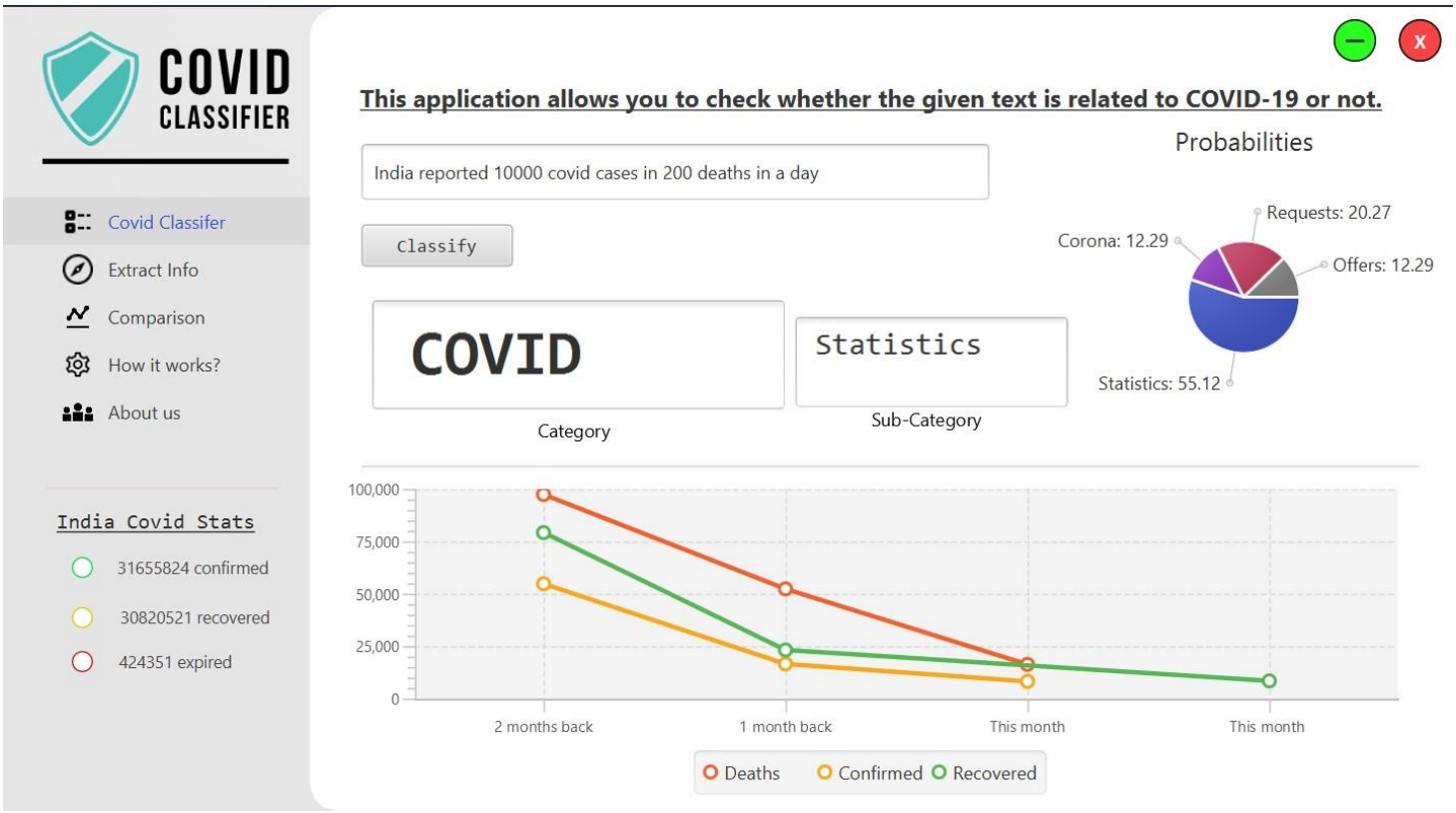

```
layoutX="216.0" layoutY="114.0" startX="-181.6666717529297" startY="-
7.62939453125E-6" stroke="#161616" />
                  <Label layoutX="155.0" layoutY="83.0" text="Max-Entropy"
underline="true">
                     <font>
                        <Font name="Consolas Bold" size="20.0" />
                     </font>
                  </Label>
                  <Label layoutX="529.0" layoutY="83.0" text="Perceptron"
underline="true">
                     <font>
                        <Font name="Consolas Bold" size="20.0" />
                     </font>
                  </Label>
                  <PieChart fx:id="analysisMEC" animated="false"
cache="true" cacheHint="QUALITY" cacheShape="false" centerShape="false"
clockwise="false" layoutX="81.0" layoutY="111.0" legendVisible="false"
prefHeight="200.0" prefWidth="265.0" scaleShape="false" title="Category" />
                  <PieChart fx:id="analysisPC" animated="false"
cache="true" cacheHint="QUALITY" cacheShape="false" centerShape="false"
clockwise="false" layoutX="456.0" layoutY="111.0" legendVisible="false"
prefHeight="200.0" prefWidth="272.0" scaleShape="false" title="Category" />
                  <PieChart fx:id="analysisMESC" animated="false"
cache="true" cacheHint="QUALITY" cacheShape="false" centerShape="false"
clockwise="false" labelLineLength="15.0" layoutX="76.0" layoutY="311.0"
legendVisible="false" prefHeight="230.0" prefWidth="259.0"
scaleShape="false" title="Sub-Category" />
                  <PieChart fx:id="analysisPSC" animated="false"
cache="true" cacheHint="QUALITY" cacheShape="false" centerShape="false"
clockwise="false" layoutX="456.0" layoutY="314.0" legendVisible="false"
prefHeight="222.0" prefWidth="281.0" scaleShape="false" title="Sub-
Category" />
                  <Label fx:id="analysisl1" layoutX="29.0" layoutY="214.0"
text="Pie Chart will display here once an input is given for covid
classifier" />
                  <Label fx:id="analysisl3" layoutX="108.0" layoutY="426.0"
text="Pie Chart will display here" />
                  <Label fx:id="analysisl2" layoutX="529.0" layoutY="214.0"
text="Pie Chart will display here" />
                  <Label fx:id="analysisl4" layoutX="503.0" layoutY="426.0"
text="Pie Chart will display here" />
                  <Line endX="383.66668701171875" layoutX="389.0"
layoutY="311.0" startX="-353.0" stroke="#ddd1d1" />
               </children>
```

```
            </Pane>

        </children>
    </Pane>
  </children>
</AnchorPane>
```

OUTPUTS



COVID CLASSIFIER

- Covid Classifer
- Extract Info
- Comparison
- How it works?
- About us

India Covid Stats

- 31655824 confirmed
- 30820521 recovered
- 424351 expired

This application allows you to check whether the given text is related to COVID-19 or not.

John and Peter lives in London and were born in 2002

Classify

NON-COVID

Category

NONE

Sub-Category

Names

```
[0..1) person  John
[2..3) person  Peter
```

Dates

```
[10..11) date  2002
```

Locations

```
[5..6) location  London
```

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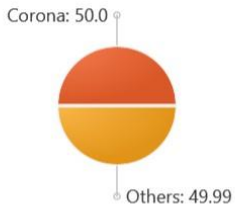
-> Comparison of ML model using different algorithms

Max-Entropy

Category

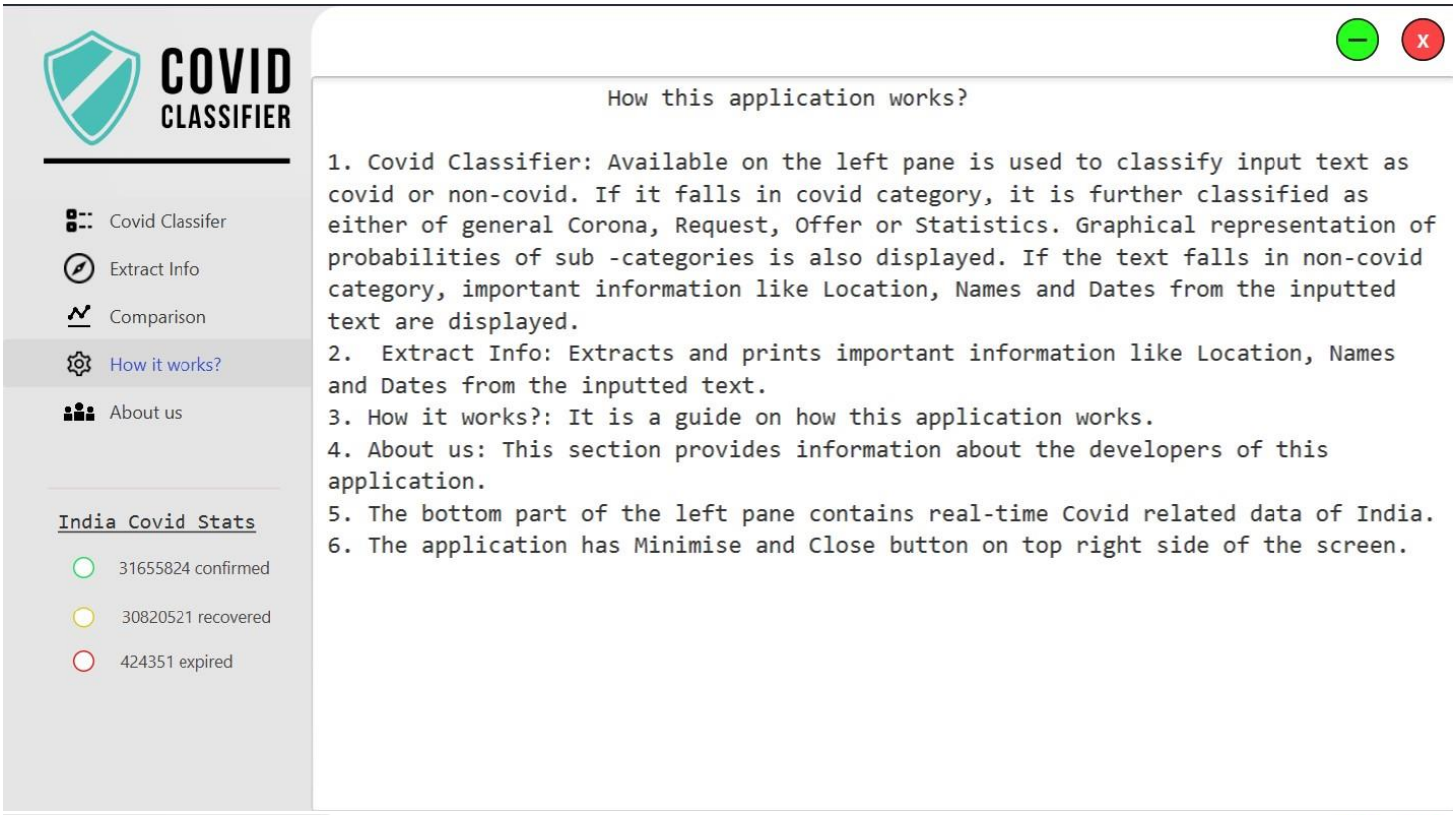


Sub-Category

Perceptron

Category

Sub-Category


COVID
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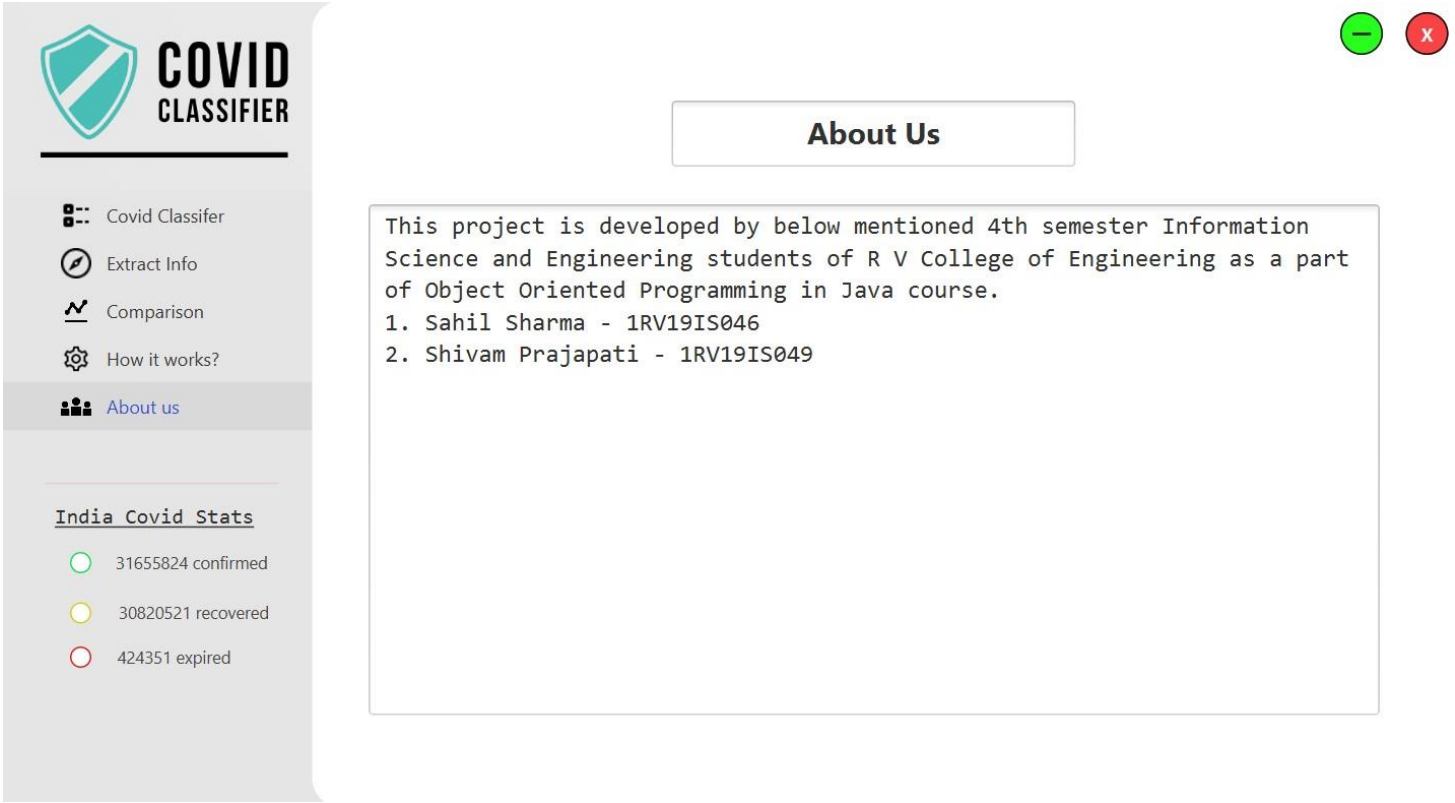
How this application works?
1. Covid Classifier: Available on the left pane is used to classify input text as covid or non-covid. If it falls in covid category, it is further classified as either of general Corona, Request, Offer or Statistics. Graphical representation of probabilities of sub -categories is also displayed. If the text falls in non-covid category, important information like Location, Names and Dates from the inputted text are displayed.
2. Extract Info: Extracts and prints important information like Location, Names and Dates from the inputted text.
3. How it works?: It is a guide on how this application works.
4. About us: This section provides information about the developers of this application.
5. The bottom part of the left pane contains real-time Covid related data of India.
6. The application has Minimise and Close button on top right side of the screen.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About Us
This project is developed by below mentioned 4th semester Information Science and Engineering students of R V College of Engineering as a part of Object Oriented Programming in Java course.
1. Sahil Sharma - 1RV19IS046
2. Shivam Prajapati - 1RV19IS049