INTELLEGENT VEHICLE DAMAGE ASSESSMENT AND COST ESTIMATOR FOR INSURANCE COMPANIES

NALAIYA THIRAN PROJECT REPORT

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TEAM ID: PNT2022TMID08394

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ABSTRACT

The motor insurance sector loses a lot of money as a result of leakage claims. The gap between the amount actually paid for claims and the amount that would have been paid hadall of the best practices in the industry been followed is known as underwriting leakage. These results have been reached using both testing and visual assessment. However, they do delay the processing of claims. By reducing loss adjustment costs, improvements in the First Notice of Loss and the speed with which claims are examined and evaluated might save a lot of money in the automobile insurance claims process. Car damage is automatically identified and classified using advanced picture analysis and pattern recognition technology, a method for automatically locating the damaged area by comparing photos of the automobile from before and after an accident. This project's proposed a CNN model that can recognize a car's damage area. If users upload images, the model can evaluate damage (be it a dent or scratch from an object), and it can also estimate the extent of damage. Insurance firms can handle claims more efficiently as a result. When accepting a car loan, particularly one for a used vehicle, lenders may also consider this model.

1. INTRODUCTION

1.1 PROJECT OVERVIEW

Vehicles are significantly rising in today's globe. Because there are more cars on the road, accidents happen more frequently because individuals are driving them at high speeds. When an accident occurs, the people file a claim with their auto insurance for the necessary funds to repair the car, because to inaccurate claims, the corporation behaves improperly and doesn't make payments now. This occurs as a result of claims leakage, which is the discrepancy between the sums secured by the firm and the sums that it should have secured inaccordance with the claims. Even if the car's damage is easily seen, the claim procedure will take longer than usual in accordance with company policy. Despite the company's best efforts, there is a delay in the claim's procedure. Differentiate the suggested approach to perhaps speed up the process of assessing automotive damage. Instead of taking hours to accomplish automotive damage detection if it were visually inspected, a system may perform it in a minute by just providing a picture of a damaged vehicle. The system can determine the analysis of the damage, the position of the damage, and the degree of the damage using machine learning and computer vision.

1.2 PURPOSE

Today's world is seeing a substantial increase in automobiles. Because there are more automobiles on the road and more people are driving them at high speeds, accidents happen more frequently. When an accident happens, the parties involved submit a claim with their auto insurance to obtain the money needed to repair the vehicle since, according to false claims, the company acts inappropriately and withholds payments.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

- An automatic vehicle damage detection platform car insurance. In this Paper, we present a damage vehicles part detection platform, called intelligent.
- Using images taken at the site of an accident can save time and money when filling insurance claims as well as provide more convenience for drivers. Artificial intelligence (AL) in the sense of machine learning and deep learning algorithms can assists in solving problems.
- Both computer vision and machine learning. The task of visually classifying an object consists in assigning an object to a category or set of categories the object belongs.
- We apply deep learning-based algorithms, VGG16 and VGG19, for car damage detection and assessment in real world datasets. The algorithms Detect the damaged part of a car, assess its location and severity.
- The systems of these kinds are used to identify the damage of a vehicle once an accident happens by the driver and also by the insurance company to detect and determine a suitable amounts per damage and vehicle rental companies to inform about the damage of a vehicle to the customer. The core technique here is object recognition.
- The demand of automobile insurance claims and intelligent transportation, combined with abundant basic data and advanced machine vision algorithm, an intelligent damage determination system of 'Artificial Intelligence Vehicle Insurance' is constructed.
- Through interest in applicable technology in business and desire to close the gap between business and technical view. The author attempted to take image recognition and insurance as a combination.

2.2 REFERENCES

[1]. R.E. Ruitenbeek, Convolutional Neural Networks for vehicle damage detection, 2021

[2]. Ritik Gandhi1Deep Learning Based Car Damage Detection, Classification and Severity,2021

[3]. Siddhant Gole, Car Damage Assessment to Automate Insurance Claim, 2022

[4]. Ruixing Ming, Using Machine Learning Models to Compare Various ResamplingMethods in Predicting Insurance Fraud, 2021

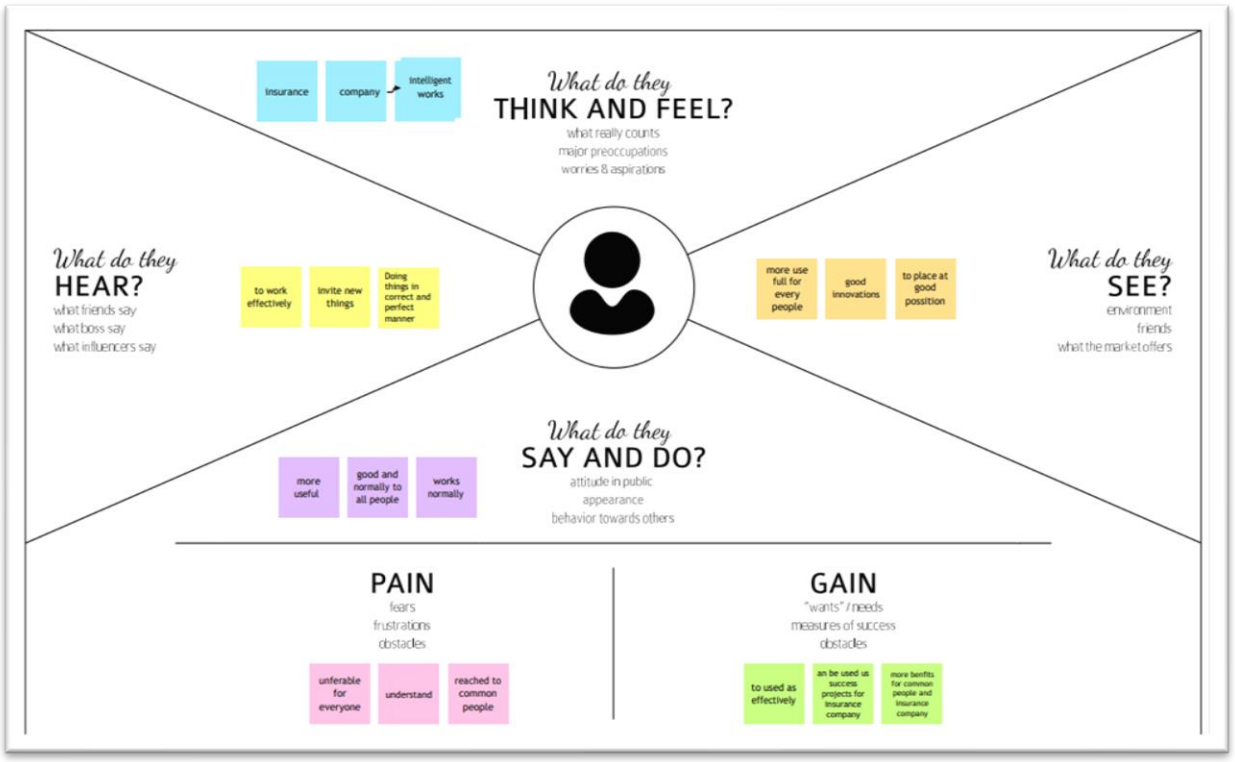
[5]. Kitsuchart Pasupa, Evaluation of deep learning algorithms for semantic segmentation ofcar parts, 2021

2.3 PROBLEM STATEMENT DEFINITION

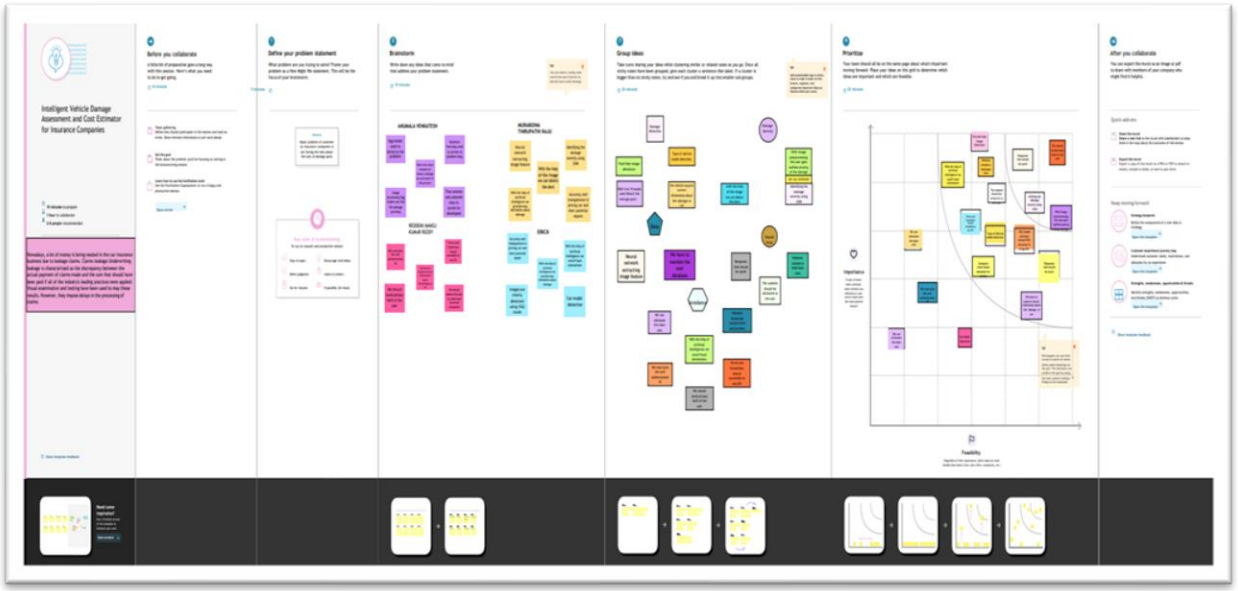
In existing system, the procedure of making an insurance claim for an automobile is laborious, and there is a delay before the first reimbursement is authorized. Insurance firms lose millions of dollars each year due to claim leakage as a result of the expansion of the vehicle sector and the daily rise in the number of accidents. The discrepancy between the company's actual spending and what they should have really spent is known as claim leakage.Ineffective claim processing, erroneous payments, human error such as a lack of quality control or poor customer service or even claim fraud may be to blame for this. Auditing closed claim files is the only way to find claim leakage.

3. IDEATION &PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS



3.2 IDEATION & BRAINSTORMING



3.3 PROPOSED SOLUTION

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To develop an Intelligent Vehicle Damage Assessment & Cost Estimator for Insurance Companies.
2.	Idea / Solution description	Estimate the cost of damage due to the accident. Easy way to claim the insurance. It contains several categories to detect the damage.
3.	Novelty / Uniqueness	Locating the damage occurred at a place with accordance to the specific cost of the damage. It finds the exact damaged location to predict the cost. Its objective is to mechanically observe damages in vehicles, find them, classify their severity levels, and visualize them by contouring their precise locations.
4.	Social Impact / Customer Satisfaction	Easy to predict the accurate cost for the damage Everyone gets the exact details for their damage. AI has proved its efficiency in fraud detection for suspected collusion claims.
5.	Business Model (Revenue Model)	The Algorithms notice the broken area of an automobile and assess its location thus its severity.
6.	Scalability of the Solution	AI detects the accurate damaged area and predicts their cost to insure

3.4 PROBLEM SOLUTION FIT

4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

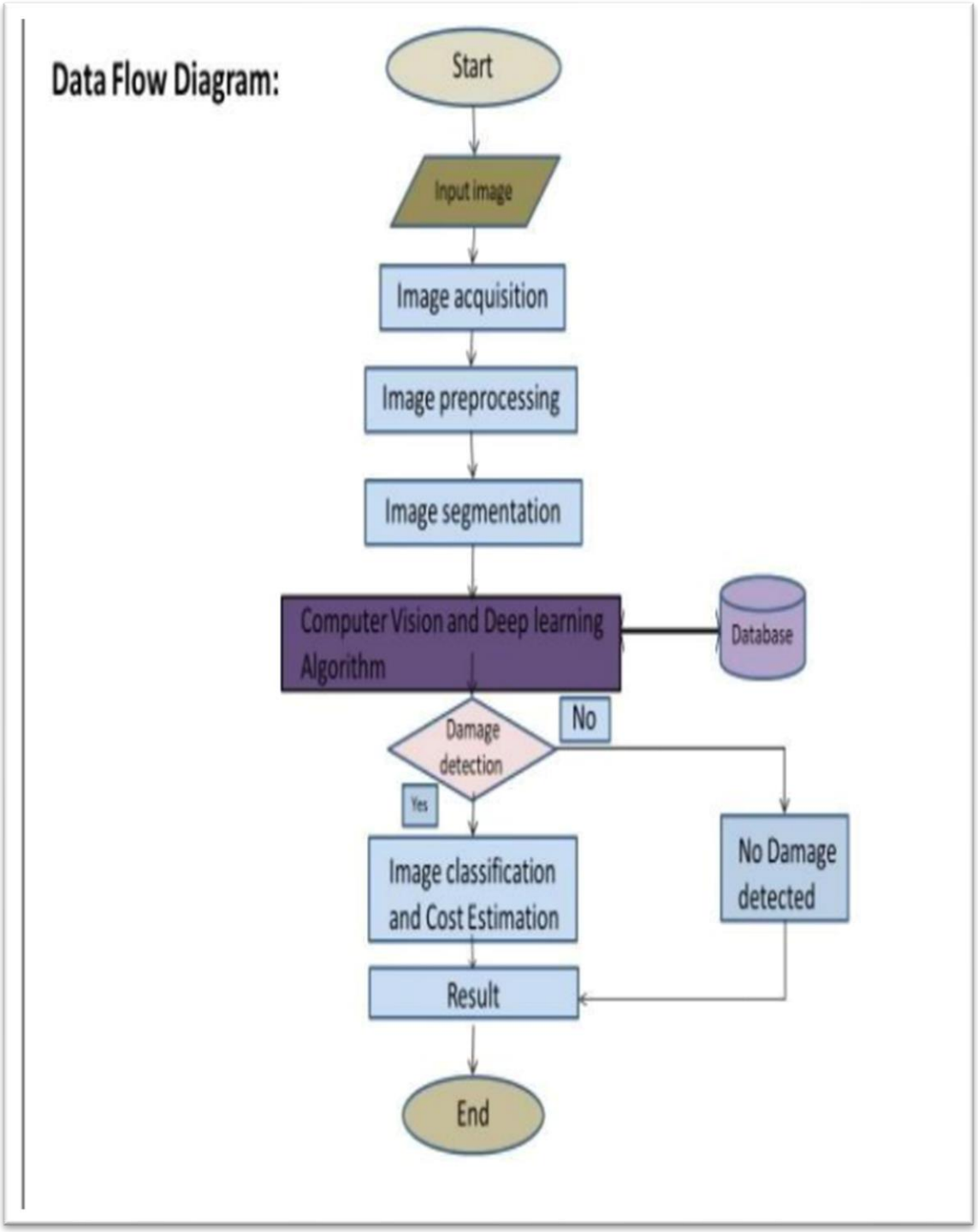
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Interface	Login System, Dashboard, Uploading Image, Review and Analyze the results.
FR-4	Collection of datasets	Information about the user and their vehicle. Information about Insurance plans.
FR-5	Results	The model must be structured with high accuracy. The results obtained from the model will be displayed for the user to understand easily.

4.2 NON-FUNCTIONAL REQUIREMENTS

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Intelligent model for damage assessment in vehicle and cost estimate provided by insurance company.
NFR-2	Security	The authenticity of the user and the confidentiality of the user's details relating to his vehicle must be preserved.
NFR-3	Reliability	This project needs to achieve good accuracy in damage assessment as well as cost estimation so that users receive an accurate and unbiased amount of insurance.
NFR-4	Performance	Abide images should be captured and uploaded to a website where the proposed model will perform a damage assessment and quote the appropriate insurance costs.
NFR-5	Availability	The webpage must be compatible with web browsers on mobile phones and computers.
NFR - 6	Scalability	The proposed solution will be scalable in the future due to more efficient and faster analysis and accurate cost forecasting.

5. PROJECT DESIGN

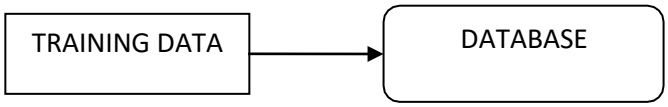
5.1 DATA FLOW DIAGRAMS



LEVEL 0

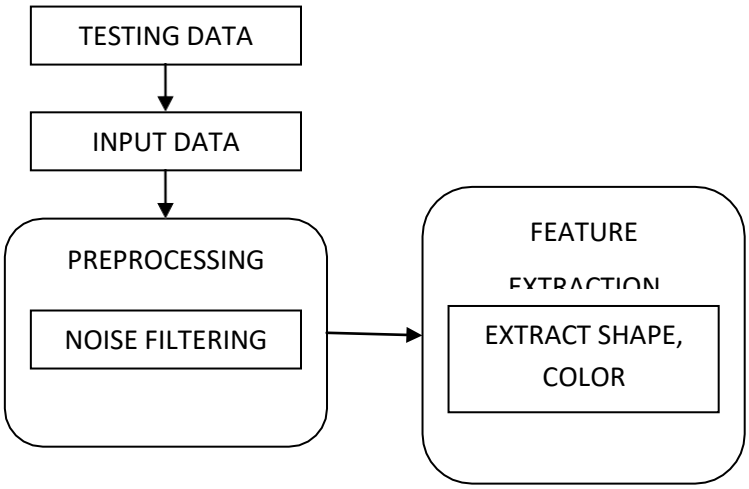
The Level 0 DFD shows how the system is divided into 'sub-systems' (processes), each of which deals with one or more of the data flows to or from an external agent, and which

together provide all of the functionality of the system as a whole. It also identifies internal data stores that must be present in order for the system to do its job and shows the flow of data between the various parts of the system.



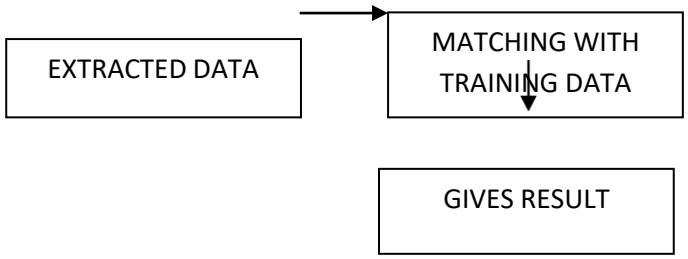
LEVEL 1

The next stage is to create the Level 1 Data Flow Diagram. This highlights the main functions carried out by the system. As a rule, to describe the system was using between two and seven functions - two being a simple system and seven being a complicated system. This enables us to keep the model manageable on screen or paper.

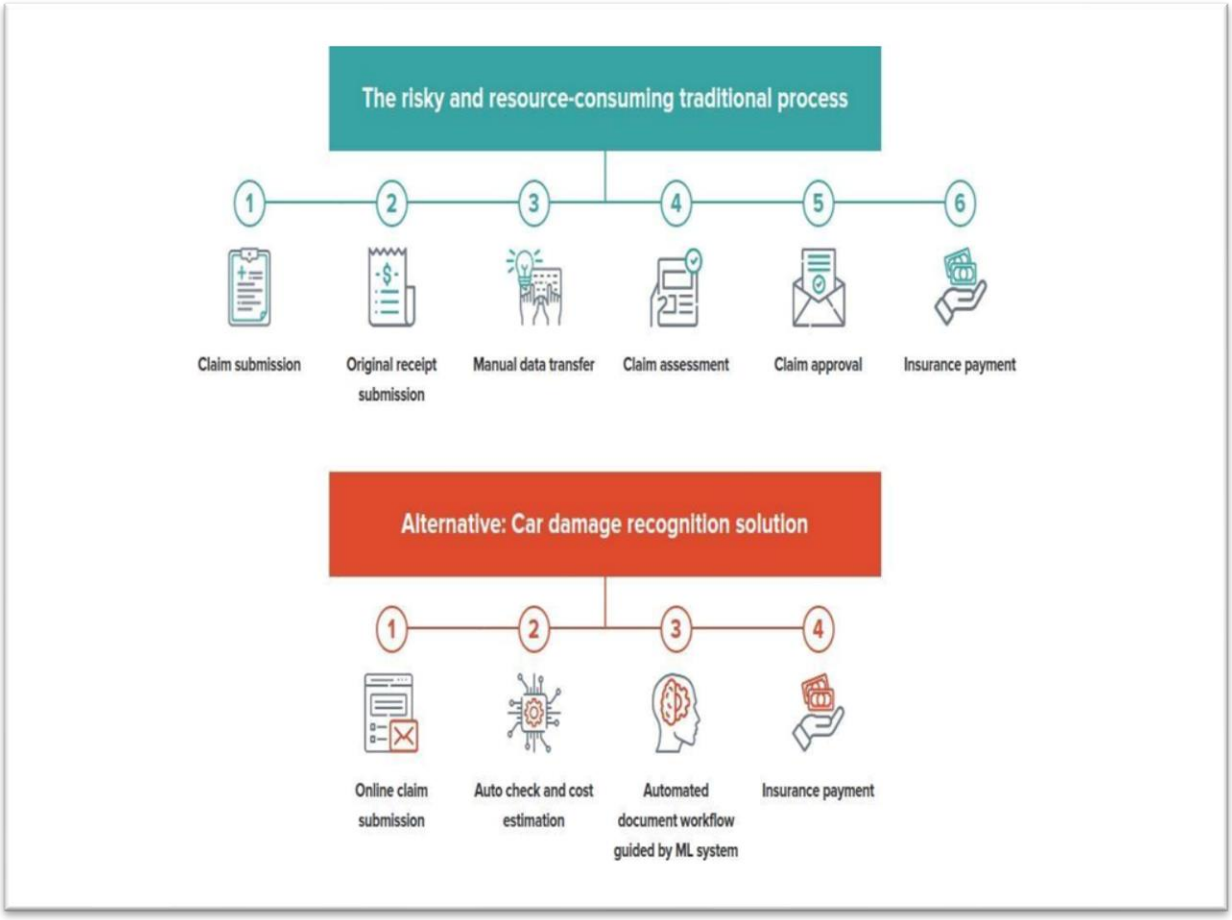


LEVEL 2

A Data Flow Diagram (DFD) tracks processes and their data paths within the businessor system boundary under investigation. A DFD defines each domain boundary and illustrates the logical movement and transformation of data within the defined boundary. The diagram shows 'what' input data enters the domain, 'what' logical processes the domain applies to that data, and 'what' output data leaves the domain. Essentially, a DFD is a tool for process modelling and one of the oldest.



5.2 SOLUTION & TECHNICAL ARCHITECTURE



5.3 USER STORIES

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, and password, and confirming my password.	2	High	Anumala Venkatesh
Sprint-1	Login	USN-2	As a user, I will receive a confirmation email once I have registered for the application	1	High	Moraboina Thirupathi Raju
Sprint-1	Dashboard	USN-3	As a user, I can register for the application through Face book	2	High	Reddimi Manoj Kumar Reddy
Sprint-2	Details about insurance company	USN-4	As a user, I can register for the application through Gmail	2	Low	Erick D
Sprint-1	repeated logins and logout	USN-5	As a user, I can log into the application by entering email & password	1	Medium	Anumala Venkatesh
Sprint-2	Webpage	USN-6	As a user I must capture images of my vehicle and upload it into the web portal.	2	High	Moraboina Thirupathi Raju

Sprint-3	Details about estimated cost based on damage	USN-7	As a user I must receive a detailed report of the damages present in the vehicle and the cost-estimated	2	High	Reddimi Manoj Kumar Reddy
Sprint-4	Provide friendly and efficient customersupport and sort out the queries.	USN-8	As a user, I need to get support from developers in case of queries and failure of service provided	2	High	Anumala Venkatesh
Sprint-4	overview the entire process and act as a bridge between user and developer	USN-9	We need to satisfy the customer needs in an efficient way and make sure any sort of errors is fixed	2	High	Moraboina Thirupathi Raju

6. PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint 1	20	6 days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint 2	20	6 days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint 3	20	6 days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint 4	20	6 days	14 Nov 202	19 Nov 2022	20	19 Nov 2022

6.2 SPRINT DELIVERY SCHEDULE

Sprint	Duration	Sprint Start Date	Sprint End Date (Planned)	Sprint Release Date (Actual)
Sprint 1	6 days	24 Oct 2022	29 Oct 2022	29 Oct 2022
Sprint 2	6 days	31 Oct 2022	05 Nov 2022	05 Nov 2022
Sprint 3	6 days	07 Nov 2022	12 Nov 2022	12 Nov 2022
Sprint 4	6 days	14 Nov 202	19 Nov 2022	19 Nov 2022

6.3 REPORTS FROM JIRA

Velocity: We have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

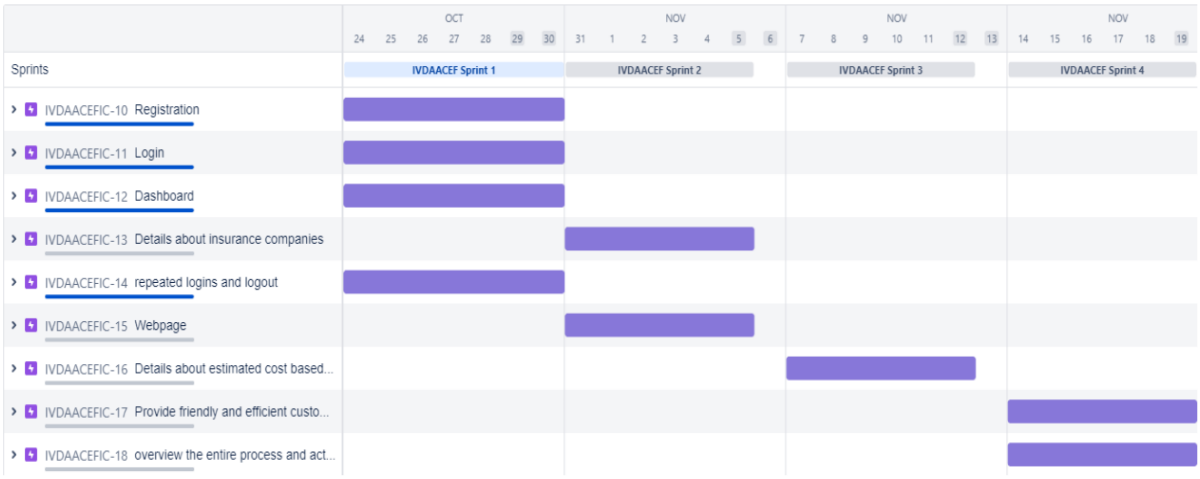
AV = Sprint duration/Velocity

= 20/6

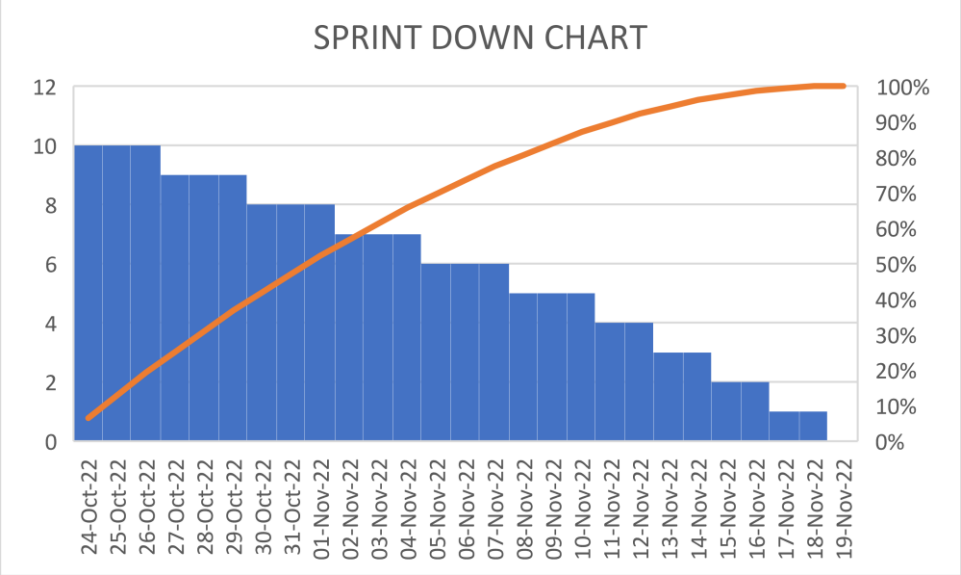
= 3

Burn down Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time



Sprint Down Chart:



7. CODING & SOLUTIONING

7.1 NEW USER:

```
<html xmlns="">
<head>
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<title>Secured data communication</title>
<meta name="keywords" content="" />
<meta name="description" content="" />
<link href="default.css" rel="stylesheet" type="text/css" />
<style>

/*
Design by Free CSS Templates
http://www.freecsstemplates.org
Released for free under a Creative Commons Attribution 2.5 License
*/

body {
    margin: 0;
    padding: 0;
    background: #FFFFFF url(static/images/img01.gif) repeat-x;
    font-family: Georgia, "Times New Roman", Times, serif;
    font-size: 13px;
    color: #666666;
}

h1, h2, h3 {
    margin: 0;
    font-weight: normal;
    color: #3F586B;
}

h1 {
    font-size: 197%;
}

h2 {
    font-size: 167%;
}

h3 {
    font-size: 100%;
    font-weight: bold;
}

p, ol, ul {
```

```
    line-height: 170%;
}

p {
}

ol {
    margin-left: 0;
    padding-left: 0;
    list-style-position: inside;
}

ul {
    margin-left: 0;
    padding-left: 0;
    list-style: none;
}

ul li {
    padding-left: 15px;
    background: url(static/images/img07.gif) no-repeat 0px 7px;
}

blockquote {
    margin: 0;
    padding-left: 20px;
    font-style: italic;
}

blockquote * {
}

a {
    color: #FF5723;
}

a:hover {
    text-decoration: none;
    color: #1777B1;
}

img {
    border: none;
}

img.left {
    float: left;
    margin: 3px 15px 0 0;
```

```
}

img.right {
    float: right;
    margin: 3px 0 0 15px;
}

hr {
    display: none;
}

/* Header */

#header {
    width: 700px;
    height: 235px;
    margin: 0 auto;
    background: #A4C0C8 url(static/images/img02.jpg) no-repeat;
}

/* Logo */

#logo {
    height: 190px;
}

#logo h1, #logo h2 {
    text-align: center;
}

#logo h1 {
    padding-top: 40px;
    font-size: 350%;
}

#logo h2 {
    font-size: 150%;
}

#logo a {
    text-decoration: none;
    color: #3F586B;
}

/* Menu */

#menu {
    padding-top: 0;
```

```
    width: 798px;
}

#menu ul {
    margin: 0;
    padding: 10px 0 0 0;
    list-style: none;
    line-height: normal;
    text-align: center;
}

#menu li {
    display: inline;
    margin: 0;
    padding: 0;
}

#menu a {
    padding: 0 20px;
    text-decoration: none;
    font-size: 136%;
    font-weight: bold;
    color: #610720;
}

#menu a:hover {
    text-decoration: underline;
}

#menu .active a {
    color: #FFFFFF;
}

/* Page */

#page {
    width: 730px;
    margin: 0 auto;
    padding: 30px 0;
}

/* Content */

#content {
    float: left;
    width: 800px;
    padding-top: 8px;
}
```

```
.twocols {
}

.twocols .title {
    padding-bottom: 10px;
    border-bottom: 1px solid #97C984;
}

.twocols .col1, .twocols .col2 {
    width: 190px;
}

.twocols .col1 {
    float: left;
}

.twocols .col2 {
    float: right;
}

.twocols ul {
}

.twocols ul li {
    padding-left: 0;
}

/* Sidebar */

#sidebar {
    float: right;
    width: 260px;
}

.boxed {
    margin: 0 0 20px 0;
}

.boxed .title {
    width: 250px;
    height: 35px;
    margin: 0;
    padding: 10px 0 0 10px;
    background: #A8C3CB url(static/images/img03.jpg) no-repeat;
    font-size: 136%;
    color: #144B6B;
}
```

```
.boxed .content {
    padding: 20px;
    border: 1px solid #97C984;
    border-top: none;
}

.boxed h3 {
    margin: 0;
}

.boxed p, .boxed ul, .boxed ol {
    margin: 0;
    padding: 0;
    list-style: none;
    line-height: normal;
}

.boxed ul {
}

.boxed ul li {
    padding: 8px 0 8px 10px;
    background: url(static/images/img04.gif) no-repeat 0px 13px;
}

.boxed ul li.first {
    border: none;
}

/* Search */

#search {
}

#search form {
    margin: 0;
    padding: 0;
}

#search fieldset {
    margin: 0;
    padding: 0;
    border: none;
}

#search p {
    float: left;
```

```
    padding-top: 5px;
    font-size: 85%;
}

#searchinput {
    width: 210px;
    margin-bottom: 5px;
}

#searchsubmit {
    float: right;
}

/* Footer */

#footer {
    height: 100px;
    padding: 20px;
    background: #5F919E;
    border-top: 5px solid #4C747E;
}

#footer p {
    margin: 0;
    text-align: center;
    line-height: normal;
    font-size: 85%;
    color: #FFFFFF;
}

#footer a {
    color: #FFFFFF;
}
.style5 {color: #1A3B5C}
</style>
</head>
<body>
<div id="header">
    <div id="logo">
        <h1><a href="#"> Vehicle Damage Assessment  </a></h1>
        <h2><a href="">Cost Estimator</a></h2>
  </div>
    <div id="menu">
        <ul>
            <li><a href="/">Home</a></li>
            <li><a href="/user">UserLogin</a></li>
            <li class="active"><a href="/NewUser">NewUser</a></li>
```

```
        </ul>
    </div>
</div>
<div id="page">
    <div id="content">
        <div style="margin-bottom: 20px;">

            <p align="justify"><strong>
              <form name="form1" method="post" action="/newuse">
                <table width="389" height="214" border="0" align="center">
                  <tr>
                    <td colspan="2"><div align="center" class="style5">
                        <h2 class="style5">New User </h2>
                    </div></td>
                  </tr>


                  <tr>
                    <td height="37"><h2 class="style5">Name </h2></td>
                    <td><label>
                      <input name="name" type="text" id="name" />
                    </label></td>
                  </tr>
                    <tr>
                    <td height="37"><h2 class="style5">Email id </h2></td>
                    <td><label>
                      <input name="_id" type="text" id="_id" />
                    </label></td>

                  </tr>
                  <tr>
                    <td><h2 class="style5">Password</h2></td>
                    <td><label>
                      <input name="psw" type="password" id="psw" />
                    </label></td>
                  </tr>
                  <tr>
                    <td> </td>
                    <td>
                      <input type="submit" name="Submit" value="Submit" />
<input type="reset" name="reset" value="Reset" />
                    </td>
                  </tr>
                </table>
              </form>
            </p>
            <p> </p>
            </blockquote>
      </div>
```

```
        <div> </div>
      <div class="twocols"></div>
    </div>
    <!-- end content -->
    <!-- end sidebar -->
    <div style="clear: both;"> </div>
</div>
<!-- end page -->
<div id="footer">
    <p id="legal"> <a href="#" title="This page validates as CSS"><abbr
title="Cascading Style Sheets"></abbr></a></p>
</div>
<div align=center> <a href='#'></a></div>
</body>
</html>
```

7.2 DATABASE SCHEMA:

```
from cloudant.client import  Cloudant

import cv2

client = Cloudant.iam("45db67dc-e5f7-44da-b3bf-b97c699d1995-bluemix","vDHo3N-
zoAp0E0uQ3iH5uXvPc5fhzm8JCt0j-JalHzTE",connect=True)
my_database = client.create_database("database-dharan")


app = Flask(__name__)
app.config.from_object(__name__)
app.config['SECRET_KEY'] = '7d441f27d441f27567d441f2b6176a'
```

8. TESTING

8.1 TEST CASES

A test case has components that describe input, action, and an expected response, in order to determine if a feature of an application is working correctly. A test case is a setof instructions on "HOW" to validate a particular test objective/target, which when followed will tell us if the expected behavior of the system is satisfied or not.

Characteristics of a good test case:

- Accurate: Exacts the purpose.
- Economical: No unnecessary steps or words.
- Traceable: Capable of being traced to requirements.
- Repeatable: Can be used to perform the test over and over.
- Reusable: Can be reused if necessary.

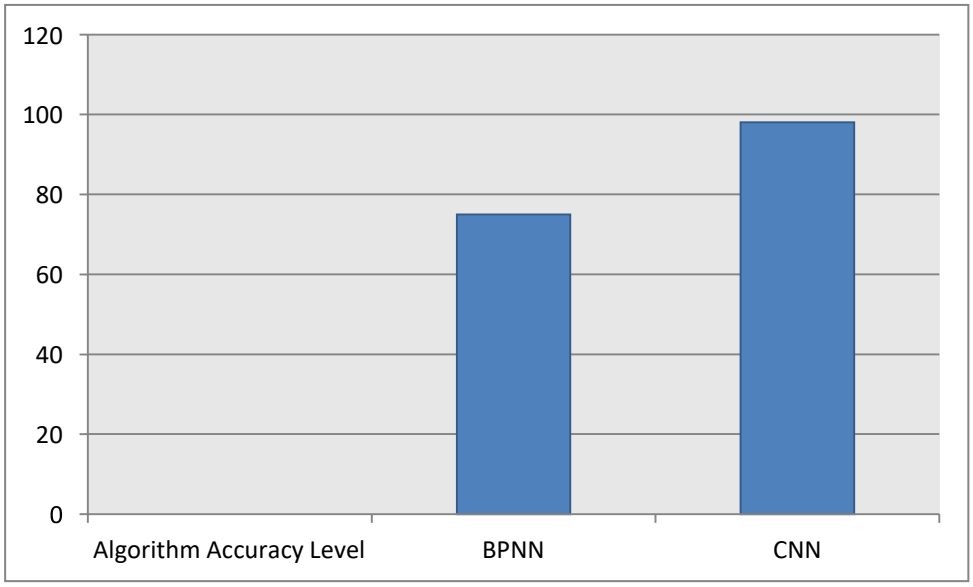
S.NO	Scenario	Input	Excepted output	Actual output
1	User Registration	Enter E-Mail address and Password	Register	Register success.
2	User login	Username and password	Login	Login success.
3	Upload Image	Upload damaged vehicle image as a input	Detecting object and analyze for claim insurance	Details are storedin a database.
4	Estimation of Cost	Body and Level images which are damaged	Estimating the cost	Cost is estimated successfully.
5	User Logout	Logout	Going back to dashboard	Successfully Logged out.

8.2 USER ACCEPTANCE TESTING

This sort of testing is carried out by users, clients, or other authorized bodies to identify the requirements and operational procedures of an application or piece of software. The most crucial stage of testing is acceptance testing since it determines whether or not the customer will accept the application or program. It could entail the application's U.I., performance, usability, and usefulness. It is also referred to as end-user testing, operational acceptance testing, and user acceptance testing (UAT).

9. RESULTS

9.1 PERFORMANCE METRICS



10.ADVANTAGES & DISADVANTAGES

ADVANTAGE

- Digitalized claim process makes easy to use
- Give the accurate result of the damaged vehicle
- Helps the insurance company to analyze the damaged vehicle and also paymentprocess.

DISADVANTAGE

- It will take more time to claim the insurance in manual process
- Because of incorrect claims, the company behaves badly and doesn't make paymentscurrently.
- Poor customer support

11.CONCLUSION

In this research proposal, a neural network-based solution for automobile detection will be used to address the issues of automotive damage analysis and position and severity prediction. This project does several tasks in one bundle. The method will unquestionably assist the insurance firms in conducting far more thorough and systematic analyses of the vehicle damage. Simply sending the system a photograph of the vehicle, it will evaluate itand determine whether there is damage of any type, where it is located, and how severe it is.

12.FUTURE SCOPE

In future work, need to use several regularization methods with a big dataset in our next work. Anticipate the cost of a car damaged component more accurately and reliably if we have higher quality datasets that include the attributes of a car (make, model, and year of production), location data, kind of damaged part, and repair cost. This study makes it possibleto work together on picture recognition projects in the future, with a focus on the auto insurance industry. The study was able to accurately validate the presence of damage, its location, and its degree while eliminating human bias. These can be further enhanced by adding the on-the-fly data augmentation approaches.

13.APPENDIX

SOURCE CODE:

app.py:

```
from flask import Flask, render_template, flash, request,session
from cloudant.client import  Cloudant

import cv2

client = Cloudant.iam("45db67dc-e5f7-44da-b3bf-b97c699d1995-bluemix","vDHo3N-
zoAp0E0uQ3iH5uXvPc5fhzm8JCt0j-JalHzTE",connect=True)
my_database = client.create_database("database-dharan")


app = Flask(__name__)
app.config.from_object(__name__)
app.config['SECRET_KEY'] = '7d441f27d441f27567d441f2b6176a'



@app.route("/")
def homepage():

    return render_template('index.html')



@app.route("/userhome")
def userhome():

    return render_template('userhome.html')
@app.route("/addamount")

@app.route("/NewUser")
def NewUser():

    return render_template('NewUser.html')









@app.route("/user")
def user():
```

```
    return render_template('user.html')


@app.route("/newuse",methods=['GET','POST'])
def newuse():
    if request.method == 'POST':#

        x = [x for x in request.form.values()]
        print(x)
        data = {
            '_id': x[1],
            'name': x[0],
            'psw': x[2]
        }
        print(data)
        query = {'_id': {'Seq': data['_id']}}
        docs = my_database.get_query_result(query)
        print(docs)
        print(len(docs.all()))
        if (len(docs.all()) == 0):
            url = my_database.create_document(data)
            return render_template('goback.html', data="Register, please login
using your details")
        else:
            return render_template('goback.html', data="You are already a
member, please login using your details")

@app.route("/userlog", methods=['GET', 'POST'])
def userlog():
        if request.method == 'POST':

            user = request.form['_id']
            passw = request.form['psw']
            print(user, passw)

            query = {'_id': {'$eq': user}}
            docs = my_database.get_query_result(query)
            print(docs)
            print(len(docs.all()))
            if (len(docs.all()) == 0):
                return render_template('goback.html', pred="The username is
not found.")
            else:
                if ((user == docs[0][0]['_id'] and passw ==
docs[0][0]['psw'])):

                    return render_template("userhome.html")
                else:
```

```
                    return render_template('goback.html',data="user name and
password incorrect")




@app.route("/predict", methods=['GET', 'POST'])
def predict():
    if request.method == 'POST':


        file = request.files['fileupload']
        file.save('static/Out/Test.jpg')

        import warnings
        warnings.filterwarnings('ignore')

        import tensorflow as tf
        classifierLoad = tf.keras.models.load_model('body.h5')

        import numpy as np
        from tensorflow.keras.preprocessing import image

        test_image = image.load_img('static/Out/Test.jpg', target_size=(200,
200))
        img1 = cv2.imread('static/Out/Test.jpg')
        test_image = image.img_to_array(test_image)
        test_image = np.expand_dims(test_image, axis=0)
        result = classifierLoad.predict(test_image)

        result1 = ''

        if result[0][0] == 1:

            result1 = "front"


        elif result[0][1] == 1:

            result1 = "rear"

        elif result[0][2] == 1:
            result1 = "side"



        file = request.files['fileupload1']
```

```
        file.save('static/Out/Test.jpg')

        import warnings
        warnings.filterwarnings('ignore')

        import tensorflow as tf
        classifierLoad = tf.keras.models.load_model('level.h5')

        import numpy as np
        from keras.preprocessing import image
        from tensorflow.keras.utils import load_img,img_to_array
        test_image = image.load_img('static/Out/Test.jpg', target_size=(200,
200))
        img1 = cv2.imread('static/Out/Test.jpg')
        test_image = image.img_to_array(test_image)
        test_image = np.expand_dims(test_image, axis=0)
        result = classifierLoad.predict(test_image)

        result2 = ''

        if result[0][0] == 1:

            result2 = "minor"


        elif result[0][1] == 1:

            result2 = "moderate"

        elif result[0][2] == 1:
            result2 = "severe"



        if (result1 == "front" and result2 == "minor"):
            value = "3000 - 5000 INR"
        elif (result1 == "front" and result2 == "moderate"):
            value = "6000 8000 INR"
        elif (result1 == "front" and result2 == "severe"):
            value = "9000 11000 INR"

        elif (result1 == "rear" and result2 == "minor"):
            value = "4000 - 6000 INR"

        elif (result1 == "rear" and result2 == "moderate"):
            value = "7000 9000 INR"

        elif (result1 == "rear" and result2 == "severe"):
            value = "11000 - 13000 INR"
```

```
        elif (result1 == "side" and result2 == "minor"):
            value = "6000 - 8000 INR"

        elif (result1 == "side" and result2 == "moderate"):
            value = "9000 - 11000 INR"

        elif (result1 == "side" and result2 == "severe"):
            value = "12000 - 15000 INR"

        else:
            value = "16000 - 50000 INR"


        return render_template('userhome.html', prediction=value)



if __name__ == '__main__':
    app.run(debug=True, use_reloader=False)
```

NewUser.html:

```
<html xmlns="">
<head>
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<title>Secured data communication</title>
<meta name="keywords" content="" />
<meta name="description" content="" />
<link href="default.css" rel="stylesheet" type="text/css" />
<style>

/*
Design by Free CSS Templates
http://www.freecsstemplates.org
Released for free under a Creative Commons Attribution 2.5 License
*/

body {
    margin: 0;
    padding: 0;
    background: #FFFFFF url(static/images/img01.gif) repeat-x;
    font-family: Georgia, "Times New Roman", Times, serif;
    font-size: 13px;
    color: #666666;
}

h1, h2, h3 {
```

```
    margin: 0;
    font-weight: normal;
    color: #3F586B;
}

h1 {
    font-size: 197%;
}

h2 {
    font-size: 167%;
}

h3 {
    font-size: 100%;
    font-weight: bold;
}

p, ol, ul {
    line-height: 170%;
}

p {
}

ol {
    margin-left: 0;
    padding-left: 0;
    list-style-position: inside;
}

ul {
    margin-left: 0;
    padding-left: 0;
    list-style: none;
}

ul li {
    padding-left: 15px;
    background: url(static/images/img07.gif) no-repeat 0px 7px;
}

blockquote {
    margin: 0;
    padding-left: 20px;
    font-style: italic;
}
```

```
blockquote * {
}

a {
    color: #FF5723;
}

a:hover {
    text-decoration: none;
    color: #1777B1;
}

img {
    border: none;
}

img.left {
    float: left;
    margin: 3px 15px 0 0;
}

img.right {
    float: right;
    margin: 3px 0 0 15px;
}

hr {
    display: none;
}

/* Header */

#header {
    width: 700px;
    height: 235px;
    margin: 0 auto;
    background: #A4C0C8 url(static/images/img02.jpg) no-repeat;
}

/* Logo */

#logo {
    height: 190px;
}

#logo h1, #logo h2 {
    text-align: center;
}
```

```css
#logo h1 {
    padding-top: 40px;
    font-size: 350%;
}

#logo h2 {
    font-size: 150%;
}

#logo a {
    text-decoration: none;
    color: #3F586B;
}

/* Menu */

#menu {
    padding-top: 0;
    width: 798px;
}

#menu ul {
    margin: 0;
    padding: 10px 0 0 0;
    list-style: none;
    line-height: normal;
    text-align: center;
}

#menu li {
    display: inline;
    margin: 0;
    padding: 0;
}

#menu a {
    padding: 0 20px;
    text-decoration: none;
    font-size: 136%;
    font-weight: bold;
    color: #610720;
}

#menu a:hover {
    text-decoration: underline;
}
```

```
#menu .active a {
    color: #FFFFFF;
}

/* Page */

#page {
    width: 730px;
    margin: 0 auto;
    padding: 30px 0;
}

/* Content */

#content {
    float: left;
    width: 800px;
    padding-top: 8px;
}

.twocols {
}

.twocols .title {
    padding-bottom: 10px;
    border-bottom: 1px solid #97C984;
}

.twocols .col1, .twocols .col2 {
    width: 190px;
}

.twocols .col1 {
    float: left;
}

.twocols .col2 {
    float: right;
}

.twocols ul {
}

.twocols ul li {
    padding-left: 0;
}

/* Sidebar */
```

```
#sidebar {
    float: right;
    width: 260px;
}

.boxed {
    margin: 0 0 20px 0;
}

.boxed .title {
    width: 250px;
    height: 35px;
    margin: 0;
    padding: 10px 0 0 10px;
    background: #A8C3CB url(static/images/img03.jpg) no-repeat;
    font-size: 136%;
    color: #144B6B;
}

.boxed .content {
    padding: 20px;
    border: 1px solid #97C984;
    border-top: none;
}

.boxed h3 {
    margin: 0;
}

.boxed p, .boxed ul, .boxed ol {
    margin: 0;
    padding: 0;
    list-style: none;
    line-height: normal;
}

.boxed ul {
}

.boxed ul li {
    padding: 8px 0 8px 10px;
    background: url(static/images/img04.gif) no-repeat 0px 13px;
}

.boxed ul li.first {
    border: none;
}
```

```
/* Search */

#search {
}

#search form {
    margin: 0;
    padding: 0;
}

#search fieldset {
    margin: 0;
    padding: 0;
    border: none;
}

#search p {
    float: left;
    padding-top: 5px;
    font-size: 85%;
}

#searchinput {
    width: 210px;
    margin-bottom: 5px;
}

#searchsubmit {
    float: right;
}

/* Footer */

#footer {
    height: 100px;
    padding: 20px;
    background: #5F919E;
    border-top: 5px solid #4C747E;
}

#footer p {
    margin: 0;
    text-align: center;
    line-height: normal;
    font-size: 85%;
    color: #FFFFFF;
}
```

```
#footer a {
    color: #FFFFFF;
}
.style5 {color: #1A3B5C}
</style>
</head>
<body>
<div id="header">
    <div id="logo">
        <h1><a href="#"> Vehicle Damage Assessment  </a></h1>
        <h2><a href="">Cost Estimator</a></h2>
  </div>
    <div id="menu">
        <ul>
            <li><a href="/">Home</a></li>
            <li><a href="/user">UserLogin</a></li>
            <li class="active"><a href="/NewUser">NewUser</a></li>


        </ul>
    </div>
</div>
<div id="page">
    <div id="content">
        <div style="margin-bottom: 20px;">

            <p align="justify"><strong>
              <form name="form1" method="post" action="/newuse">
                <table width="389" height="214" border="0" align="center">
                  <tr>
                    <td colspan="2"><div align="center" class="style5">
                        <h2 class="style5">New User </h2>
                    </div></td>
                  </tr>


                  <tr>
                    <td height="37"><h2 class="style5">Name </h2></td>
                    <td><label>
                      <input name="name" type="text" id="name" />
                    </label></td>
                  </tr>
                    <tr>
                    <td height="37"><h2 class="style5">Email id </h2></td>
                    <td><label>
                      <input name="_id" type="text" id="_id" />
                    </label></td>
```

```
                </tr>
                <tr>
                  <td><h2 class="style5">Password</h2></td>
                  <td><label>
                    <input name="psw" type="password" id="psw" />
                  </label></td>
                </tr>
                <tr>
                  <td> </td>
                  <td>
                    <input type="submit" name="Submit" value="Submit" />
<input type="reset" name="reset" value="Reset" />
                  </td>
                </tr>
              </table>
            </form>
          </p>
          <p> </p>
          </blockquote>
      </div>
        <div> </div>
      <div class="twocols"></div>
    </div>
    <!-- end content -->
    <!-- end sidebar -->
    <div style="clear: both;"> </div>
</div>
<!-- end page -->
<div id="footer">
    <p id="legal"> <a href="#" title="This page validates as CSS"><abbr
title="Cascading Style Sheets"></abbr></a></p>
</div>
<div align=center> <a href='#'></a></div>
</body>
</html>
```

Index.html:

```
<html xmlns="">
<head>
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<title>Vehicle Damage Assessment & Cost Estimator</title>
<meta name="keywords" content="" />
<meta name="description" content="" />
<link href="default.css" rel="stylesheet" type="text/css" />
<style>

/*
```

```
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http://www.freecsstemplates.org
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*/

body {
    margin: 0;
    padding: 0;
    background: #FFFFFF url(static/images/img01.gif) repeat-x;
    font-family: Georgia, "Times New Roman", Times, serif;
    font-size: 13px;
    color: #666666;
}

h1, h2, h3 {
    margin: 0;
    font-weight: normal;
    color: #3F586B;
}

h1 {
    font-size: 197%;
}

h2 {
    font-size: 167%;
}

h3 {
    font-size: 100%;
    font-weight: bold;
}

p, ol, ul {
    line-height: 170%;
}

p {
}

ol {
    margin-left: 0;
    padding-left: 0;
    list-style-position: inside;
}

ul {
    margin-left: 0;
```

```
    padding-left: 0;
    list-style: none;
}

ul li {
    padding-left: 15px;
    background: url(static/images/img07.gif) no-repeat 0px 7px;
}

blockquote {
    margin: 0;
    padding-left: 20px;
    font-style: italic;
}

blockquote * {
}

a {
    color: #FF5723;
}

a:hover {
    text-decoration: none;
    color: #1777B1;
}

img {
    border: none;
}

img.left {
    float: left;
    margin: 3px 15px 0 0;
}

img.right {
    float: right;
    margin: 3px 0 0 15px;
}

hr {
    display: none;
}

/* Header */

#header {
```

```
    width: 700px;
    height: 235px;
    margin: 0 auto;
    background: #A4C0C8 url(static/images/img02.jpg) no-repeat;
}

/* Logo */

#logo {
    height: 190px;
}

#logo h1, #logo h2 {
    text-align: center;
}

#logo h1 {
    padding-top: 40px;
    font-size: 350%;
}

#logo h2 {
    font-size: 150%;
}

#logo a {
    text-decoration: none;
    color: #3F586B;
}

/* Menu */

#menu {
    padding-top: 0;
    width: 798px;
}

#menu ul {
    margin: 0;
    padding: 10px 0 0 0;
    list-style: none;
    line-height: normal;
    text-align: center;
}

#menu li {
    display: inline;
    margin: 0;
```

```
    padding: 0;
}

#menu a {
    padding: 0 20px;
    text-decoration: none;
    font-size: 136%;
    font-weight: bold;
    color: #610720;
}

#menu a:hover {
    text-decoration: underline;
}

#menu .active a {
    color: #FFFFFF;
}

/* Page */

#page {
    width: 730px;
    margin: 0 auto;
    padding: 30px 0;
}

/* Content */

#content {
    float: left;
    width: 800px;
    padding-top: 8px;
}

.twocols {
}

.twocols .title {
    padding-bottom: 10px;
    border-bottom: 1px solid #97C984;
}

.twocols .col1, .twocols .col2 {
    width: 190px;
}

.twocols .col1 {
```

```
    float: left;
}

.twocols .col2 {
    float: right;
}

.twocols ul {
}

.twocols ul li {
    padding-left: 0;
}

/* Sidebar */

#sidebar {
    float: right;
    width: 260px;
}

.boxed {
    margin: 0 0 20px 0;
}

.boxed .title {
    width: 250px;
    height: 35px;
    margin: 0;
    padding: 10px 0 0 10px;
    background: #A8C3CB url(static/images/img03.jpg) no-repeat;
    font-size: 136%;
    color: #144B6B;
}

.boxed .content {
    padding: 20px;
    border: 1px solid #97C984;
    border-top: none;
}

.boxed h3 {
    margin: 0;
}

.boxed p, .boxed ul, .boxed ol {
    margin: 0;
    padding: 0;
```

```
    list-style: none;
    line-height: normal;
}

.boxed ul {
}

.boxed ul li {
    padding: 8px 0 8px 10px;
    background: url(static/images/img04.gif) no-repeat 0px 13px;
}

.boxed ul li.first {
    border: none;
}

/* Search */

#search {
}

#search form {
    margin: 0;
    padding: 0;
}

#search fieldset {
    margin: 0;
    padding: 0;
    border: none;
}

#search p {
    float: left;
    padding-top: 5px;
    font-size: 85%;
}

#searchinput {
    width: 210px;
    margin-bottom: 5px;
}

#searchsubmit {
    float: right;
}

/* Footer */
```

```
#footer {
    height: 100px;
    padding: 20px;
    background: #5F919E;
    border-top: 5px solid #4C747E;
}

#footer p {
    margin: 0;
    text-align: center;
    line-height: normal;
    font-size: 85%;
    color: #FFFFFF;
}

#footer a {
    color: #FFFFFF;
}
</style>
</head>
<body>
<div id="header">
    <div id="logo">
        <h1><a href="#"> Vehicle Damage Assessment  </a></h1>
        <h2><a href="">Cost Estimator</a></h2>
  </div>
    <div id="menu">
        <ul>
            <li class="active"><a href="/">Home</a></li>

            <li><a href="/user">UserLogin</a></li>
            <li><a href="/NewUser">NewUser</a></li>

        </ul>
    </div>
</div>
<div id="page">
    <div id="content">
        <div style="margin-bottom: 20px;">
            <h1 class="title">Welcome Vehicle Damage Assessment </h1>
            <p align="justify"><strong>Nowadays, a lot of money is being
wasted in the car insurance business due to leakage claims.
                Claims leakage Underwriting leakage is characterized as the
discrepancy between the actual payment of claims made and the sum
                that should have been paid if all of the industry's leading
practices were applied.
```

```
                Visual examination and testing have been used to may these
results. However, they impose delays in the processing of claims.
                The aim of this project is to build a VGG16 model that can
detect the area of damage on a car.
                The rationale for such a model is that it can be used by
insurance companies for faster processing of claims if users can upload pics
and
                the model can assess damage( be it dent scratch from and
estimates the cost of damage. This model can also be used by lenders if
                they are underwriting a car loan, especially for a used car.

</p>
            <h2> </h2>
          <p> </p>
            </blockquote>
      </div>
        <div> </div>
      <div class="twocols"></div>
    </div>
    <!-- end content -->
    <!-- end sidebar -->
    <div style="clear: both;"> </div>
</div>
<!-- end page -->
<div id="footer">
    <p id="legal"> <a href="#" title="This page validates as CSS"><abbr
title="Cascading Style Sheets"></abbr></a></p>
    </div>
<div align=center> <a href='#'></a></div>
</body>
</html>
```

User.html:

```
<html xmlns="">
<head>
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<title>Secured data communication</title>
<meta name="keywords" content="" />
<meta name="description" content="" />
<link href="default.css" rel="stylesheet" type="text/css" />
<style>

/*
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http://www.freecsstemplates.org
Released for free under a Creative Commons Attribution 2.5 License
*/
```

```
body {
    margin: 0;
    padding: 0;
    background: #FFFFFF url(static/images/img01.gif) repeat-x;
    font-family: Georgia, "Times New Roman", Times, serif;
    font-size: 13px;
    color: #666666;
}

h1, h2, h3 {
    margin: 0;
    font-weight: normal;
    color: #3F586B;
}

h1 {
    font-size: 197%;
}

h2 {
    font-size: 167%;
}

h3 {
    font-size: 100%;
    font-weight: bold;
}

p, ol, ul {
    line-height: 170%;
}

p {
}

ol {
    margin-left: 0;
    padding-left: 0;
    list-style-position: inside;
}

ul {
    margin-left: 0;
    padding-left: 0;
    list-style: none;
}
```

```
ul li {
    padding-left: 15px;
    background: url(static/images/img07.gif) no-repeat 0px 7px;
}

blockquote {
    margin: 0;
    padding-left: 20px;
    font-style: italic;
}

blockquote * {
}

a {
    color: #FF5723;
}

a:hover {
    text-decoration: none;
    color: #1777B1;
}

img {
    border: none;
}

img.left {
    float: left;
    margin: 3px 15px 0 0;
}

img.right {
    float: right;
    margin: 3px 0 0 15px;
}

hr {
    display: none;
}

/* Header */

#header {
    width: 700px;
    height: 235px;
    margin: 0 auto;
    background: #A4C0C8 url(static/images/img02.jpg) no-repeat;
```

```
}

/* Logo */

#logo {
    height: 190px;
}

#logo h1, #logo h2 {
    text-align: center;
}

#logo h1 {
    padding-top: 40px;
    font-size: 350%;
}

#logo h2 {
    font-size: 150%;
}

#logo a {
    text-decoration: none;
    color: #3F586B;
}

/* Menu */

#menu {
    padding-top: 0;
    width: 798px;
}

#menu ul {
    margin: 0;
    padding: 10px 0 0 0;
    list-style: none;
    line-height: normal;
    text-align: center;
}

#menu li {
    display: inline;
    margin: 0;
    padding: 0;
}

#menu a {
```

```
    padding: 0 20px;
    text-decoration: none;
    font-size: 136%;
    font-weight: bold;
    color: #610720;
}

#menu a:hover {
    text-decoration: underline;
}

#menu .active a {
    color: #FFFFFF;
}

/* Page */

#page {
    width: 730px;
    margin: 0 auto;
    padding: 30px 0;
}

/* Content */

#content {
    float: left;
    width: 800px;
    padding-top: 8px;
}

.twocols {
}

.twocols .title {
    padding-bottom: 10px;
    border-bottom: 1px solid #97C984;
}

.twocols .col1, .twocols .col2 {
    width: 190px;
}

.twocols .col1 {
    float: left;
}

.twocols .col2 {
```

```
    float: right;
}

.twocols ul {
}

.twocols ul li {
    padding-left: 0;
}

/* Sidebar */

#sidebar {
    float: right;
    width: 260px;
}

.boxed {
    margin: 0 0 20px 0;
}

.boxed .title {
    width: 250px;
    height: 35px;
    margin: 0;
    padding: 10px 0 0 10px;
    background: #A8C3CB url(static/images/img03.jpg) no-repeat;
    font-size: 136%;
    color: #144B6B;
}

.boxed .content {
    padding: 20px;
    border: 1px solid #97C984;
    border-top: none;
}

.boxed h3 {
    margin: 0;
}

.boxed p, .boxed ul, .boxed ol {
    margin: 0;
    padding: 0;
    list-style: none;
    line-height: normal;
}
```

```
.boxed ul {
}

.boxed ul li {
    padding: 8px 0 8px 10px;
    background: url(static/images/img04.gif) no-repeat 0px 13px;
}

.boxed ul li.first {
    border: none;
}

/* Search */

#search {
}

#search form {
    margin: 0;
    padding: 0;
}

#search fieldset {
    margin: 0;
    padding: 0;
    border: none;
}

#search p {
    float: left;
    padding-top: 5px;
    font-size: 85%;
}

#searchinput {
    width: 210px;
    margin-bottom: 5px;
}

#searchsubmit {
    float: right;
}

/* Footer */

#footer {
    height: 100px;
    padding: 20px;
```

```
    background: #5F919E;
    border-top: 5px solid #4C747E;
}

#footer p {
    margin: 0;
    text-align: center;
    line-height: normal;
    font-size: 85%;
    color: #FFFFFF;
}

#footer a {
    color: #FFFFFF;
}
.style5 {color: #1A3B5C}
</style>
</head>
<body>
<div id="header">
    <div id="logo">
            <h1><a href="#"> Vehicle Damage Assessment  </a></h1>
        <h2><a href="">Cost Estimator</a></h2>
  </div>
    <div id="menu">
        <ul>
            <li><a href="/">Home</a></li>
              <li class="active"><a href="/user">UserLogin</a></li>
                <li ><a href="/NewUser">NewUser</a></li>

        </ul>
    </div>
</div>
<div id="page">
    <div id="content">
        <div style="margin-bottom: 20px;">

            <p align="justify"><strong>
              <form name="form1" method="post" action="/userlog">
                <table width="389" height="214" border="0" align="center">
                  <tr>
                    <td colspan="2"><div align="center" class="style5">
                        <h2 class="style5">UserLogin </h2>
                    </div></td>
                  </tr>
                  <tr>
                    <td height="37"><h2 class="style5">EmailId  </h2></td>
                    <td><label>
```

```
                    <input name="_id" type="text" id="_id" />
                  </label></td>
                </tr>
                <tr>
                  <td><h2 class="style5">Password</h2></td>
                  <td><label>
                    <input name="psw" type="password" id="psw" />
                  </label></td>
                </tr>
                <tr>
                  <td> </td>
                  <td>
                    <input type="submit" name="Submit" value="Submit"
/>  <input type="reset" name="reset" value="Reset" />
                  </td>
                </tr>
              </table>
            </form>
          </p>
          <p> </p>
          </blockquote>
      </div>
        <div> </div>
      <div class="twocols"></div>
    </div>
    <!-- end content -->
    <!-- end sidebar -->
    <div style="clear: both;"> </div>
</div>
<!-- end page -->
<div id="footer">
    <p id="legal"> <a href="#" title="This page validates as CSS"><abbr
title="Cascading Style Sheets"></abbr></a></p>
</div>
<div align=center> <a href='#'></a></div>
</body>
</html>
```

Userhome.html:

```
<html xmlns="">
<head>
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<title>Secured data communication</title>
<meta name="keywords" content="" />
<meta name="description" content="" />
<link href="default.css" rel="stylesheet" type="text/css" />
<style>
```

```
/*
Design by Free CSS Templates
http://www.freecsstemplates.org
Released for free under a Creative Commons Attribution 2.5 License
*/

body {
    margin: 0;
    padding: 0;
    background: #FFFFFF url(static/images/img01.gif) repeat-x;
    font-family: Georgia, "Times New Roman", Times, serif;
    font-size: 13px;
    color: #666666;
}

h1, h2, h3 {
    margin: 0;
    font-weight: normal;
    color: #3F586B;
}

h1 {
    font-size: 197%;
}

h2 {
    font-size: 167%;
}

h3 {
    font-size: 100%;
    font-weight: bold;
}

p, ol, ul {
    line-height: 170%;
}

p {
}

ol {
    margin-left: 0;
    padding-left: 0;
    list-style-position: inside;
}
```

```css
ul {
    margin-left: 0;
    padding-left: 0;
    list-style: none;
}

ul li {
    padding-left: 15px;
    background: url(static/images/img07.gif) no-repeat 0px 7px;
}

blockquote {
    margin: 0;
    padding-left: 20px;
    font-style: italic;
}

blockquote * {
}

a {
    color: #FF5723;
}

a:hover {
    text-decoration: none;
    color: #1777B1;
}

img {
    border: none;
}

img.left {
    float: left;
    margin: 3px 15px 0 0;
}

img.right {
    float: right;
    margin: 3px 0 0 15px;
}

hr {
    display: none;
}

/* Header */
```

```
#header {
    width: 700px;
    height: 235px;
    margin: 0 auto;
    background: #A4C0C8 url(static/images/img02.jpg) no-repeat;
}

/* Logo */

#logo {
    height: 190px;
}

#logo h1, #logo h2 {
    text-align: center;
}

#logo h1 {
    padding-top: 40px;
    font-size: 350%;
}

#logo h2 {
    font-size: 150%;
}

#logo a {
    text-decoration: none;
    color: #3F586B;
}

/* Menu */

#menu {
    padding-top: 0;
    width: 798px;
}

#menu ul {
    margin: 0;
    padding: 10px 0 0 0;
    list-style: none;
    line-height: normal;
    text-align: center;
}

#menu li {
```

```
    display: inline;
    margin: 0;
    padding: 0;
}

#menu a {
    padding: 0 20px;
    text-decoration: none;
    font-size: 136%;
    font-weight: bold;
    color: #610720;
}

#menu a:hover {
    text-decoration: underline;
}

#menu .active a {
    color: #FFFFFF;
}

/* Page */

#page {
    width: 730px;
    margin: 0 auto;
    padding: 30px 0;
}

/* Content */

#content {
    float: left;
    width: 800px;
    padding-top: 8px;
}

.twocols {
}

.twocols .title {
    padding-bottom: 10px;
    border-bottom: 1px solid #97C984;
}

.twocols .col1, .twocols .col2 {
    width: 190px;
}
```

```
.twocols .col1 {
    float: left;
}

.twocols .col2 {
    float: right;
}

.twocols ul {
}

.twocols ul li {
    padding-left: 0;
}

/* Sidebar */

#sidebar {
    float: right;
    width: 260px;
}

.boxed {
    margin: 0 0 20px 0;
}

.boxed .title {
    width: 250px;
    height: 35px;
    margin: 0;
    padding: 10px 0 0 10px;
    background: #A8C3CB url(static/images/img03.jpg) no-repeat;
    font-size: 136%;
    color: #144B6B;
}

.boxed .content {
    padding: 20px;
    border: 1px solid #97C984;
    border-top: none;
}

.boxed h3 {
    margin: 0;
}

.boxed p, .boxed ul, .boxed ol {
```

```
    margin: 0;
    padding: 0;
    list-style: none;
    line-height: normal;
}

.boxed ul {
}

.boxed ul li {
    padding: 8px 0 8px 10px;
    background: url(static/images/img04.gif) no-repeat 0px 13px;
}

.boxed ul li.first {
    border: none;
}

/* Search */

#search {
}

#search form {
    margin: 0;
    padding: 0;
}

#search fieldset {
    margin: 0;
    padding: 0;
    border: none;
}

#search p {
    float: left;
    padding-top: 5px;
    font-size: 85%;
}

#searchinput {
    width: 210px;
    margin-bottom: 5px;
}

#searchsubmit {
    float: right;
}
```

```
/* Footer */

#footer {
    height: 100px;
    padding: 20px;
    background: #5F919E;
    border-top: 5px solid #4C747E;
}

#footer p {
    margin: 0;
    text-align: center;
    line-height: normal;
    font-size: 85%;
    color: #FFFFFF;
}

#footer a {
    color: #FFFFFF;
}
.style5 {color: #1A3B5C}
.style6 {font-size: 16px}
.style8 {color: #3d5b99}
</style>
</head>
<body>
<div id="header">
    <div id="logo">
            <h1><a href="#"> Vehicle Damage Assessment  </a></h1>
        <h2><a href="">Cost Estimator</a></h2>
  </div>
    <div id="menu">
        <ul>
            <li><a href="/userhome">Home</a></li>


            <li><a href="/">Logout</a></li>
        </ul>
    </div>
</div>
<div id="page">
    <div id="content">
        <div style="margin-bottom: 20px;">

            <p align="justify"><strong>
              <form action="/predict" method="post" enctype="multipart/form-
data" name="form1">
```

```
                <table border="0" align="center">
                  <tr>
                    <td colspan="2"><div align="center" class="style5">
                        <h2 class="style5"><span class="style8">Upload Image
</span></h2>
                    </div></td>
                  </tr>
                  <tr>
                    <td height="37"><h2 class="style5 style6"> Car Body Image
</h2></td>
                    <td><label>

                  <td><input name="fileupload" type="file" id="fileupload"
/></td>
                    </label></td>
                  </tr>

                     <tr>
                    <td height="37"><h2 class="style5 style6"> Car
Level  Image </h2></td>
                    <td><label>

                  <td><input name="fileupload1" type="file" id="fileupload1"
/></td>
                    </label></td>     `
                  </tr>

                     <tr>
                    <td height="37"><h2 class="style5 style6"> Estimate Cost
</h2></td>
                    <td>

                  <td>{{prediction}}</td>
                    </td>
                  </tr>
                  <tr>
                    <td> </td>
                    <td><label>
                      <input type="submit" name="Submit" value="Submit" />
                      <input type="reset" name="Submit2" value="Reset">
                    <a href="user_reg.jsp"></a></label></td>
                  </tr>
                </table>
              </form>
            </p>
            <p> </p>
            </blockquote>
      </div>
```

```
        <div> </div>
      <div class="twocols"></div>
    </div>
    <!-- end content -->
    <!-- end sidebar -->
    <div style="clear: both;"> </div>
</div>
<!-- end page -->
<div id="footer">
    <p id="legal"> <a href="#" title="This page validates as CSS"><abbr
title="Cascading Style Sheets"></abbr></a></p>
</div>
<div align=center> <a href='#'></a></div>
</body>
</html>
```

Goback.html:

```
<!DOCTYPE html>
<html>
<body>


<p>{{data}}</p>

<button onclick="goBack()">Go Back</button>

<script>
function goBack() {
  window.history.back();
}
</script>

</body>
</html>
```

GITHUB LINK:

https://github.com/IBM-EPBL/IBM-Project-7889-1658902106

DEMO VEDIO LINK:
https://youtu.be/y34XUJp9HC0