A PROJECT REPORT ON

BI Analytics

SUBMITTED BY

MR. ROHAN MAHENDRA JOSHI

FOR THE YEAR

2019-2020

UNDER THE GUIDANCE OF

PROF. MR. ABHIJEET GOLE

SUBMITTED IN PARTIAL FULFILLMENTS OF

REQUIREMENTS OF QUALIFYING

M.SC. (COMPUTER SCIENCES)

S P MANDALI'S
RAMNARAIN RUIA AUTONOMOUS COLLEGE,
MATUNGA, MUMBAI - 400 019
RE-ACCREDITED GRADE 'A+' BY NAAC

Acknowledgement

I owe my deep gratitude to our project guide Prof. Mr. Abhijeet Gole who took keen interest in my project work and guided me to complete this project successfully. I would like to extend my sincere thanks to all staff members at ITCS Department for their timely support. I would like to express gratitude towards my Prof. and Head of the department Mrs. Megha Swant for giving me opportunity to undertake this wonderful project. I am also thankful to Prof. Mrs. Rasika Mundhe and Mrs. Edith Juni for helping me to overcome obstacles in this project.

Declaration by the student

I hereby declare that the project entitled "**BI Analytics**" which is being submitted as a project of 3rd semester of Masters in computer science to Ramnarain Ruia Autonomous College, is an authenticate record of my genuine work done under the guidance of Prof. Mr.Abhijeet Gole, Department of Computer Science, Ramnarain Ruia Autonomous College.

Rohan Joshi

Preface

This project is an Analytics Dashboard based on Dummy Bank Data using Python Programming Language. For bank to know it's customers which is very is very important and know their needs what think they want and what are their expectations from bank. It also helps for strategy making and marketing of bank. The project objective is to deliver the analytics to the bank authority.

In this project all analysis is done on stored data. And data is generated randomly, regarding basic discussion with the bank managers and IT guys in bank.

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Chapter 1
Preliminary investigation

1.1 Organizational overview:

In the Bank there are several departments has Operation department, FDR department, Credit department, Insurance and Investments department, ATM department. Each Department have different tasks and different types of data generated by each department daily. All records are stored in traditional system in SQL database.

1.2 Description of system

To Start the Analysis first step is to clean the data. After cleaning of the data, we do the aggregation of data also grouping data and get the frequency count of it. We do the grouping based on the gender, region, years, days and months and other attributes specifically in data. Also finds some facts in a data, we also consider some cities at some instance. We also try to understand customers more deeply and grow rapidly in banking sector. We make some machine learning models and implement artificial intelligence in system.

To get more details of a process of developing the system and ML models and implementation of AI in Chapter No 2.

1.3 Limitation of existing system

The current system is analytics based on SQL Queries. So, it gives following disadvantages.

1. Many organizations do not have the data analysis feature in their system.
2. SQL has limited set of queries to analyze the data.
3. SQL queries are not made for data analysis.
4. Doing analysis with PL/SQL. It is time consuming and difficult in terms of line of code.
5. All the SQL analysis is summary based analysis.

1.4 Problem Statement

Create an Analytics Dash board on web. Analysis should answer all the facts and queries in a data. Data should be presented in a website which is responsive and mobile friendly.

System should identify the customer churn behaviour, and anomaly detections and evaluating risk while giving a loan, predict the income of a person and also calculate values of customer assets for mortgage. Also find which region marketing strategies are working and what are chances whether we get a customer or not.

1.5 Proposed system and advantages

In the proposed System analytics done using Pandas and matplotlib and scikit-learn in python. For representation we use HTML5 and W3-CSS as CSS library. Because of this my project satisfies all the requirements and overcome the limitation of existing system. The Proposed system is sample or demonstration of actual system. The analytics dashboard is based on web and it's mobile friendly and hosted on the Cloud. We implement of Microsoft Azure for ML and google colabs for AI model creation and training purpose.

Advantages:

- I cover all possible major aspects of analysis in given data.
- Implantation of ML Model
- Implementation of AI
- Web Interface for Access
- Mobile friendly and Responsive Website.
- Google Assistant Support

1.6 Project Scope

The scope of the project is to do data analysis of given data and covers maximum all aspect in datasets, Mostly all major ones. And create a ML model and test it on data and try to get maximum accuracy from it. Building the customer behaviour detection system is the goal of the project for the growth of the bank.

1.7 Feasibility study

I fulfil the 95% wish of stake holder. And the remaining 5% will be completed in the next release. The Project is 100% completed and working in all platforms.

Website is very easy to use. It has attractive UI. Any person can easily operate this application. The application is easy to scaling and easy to maintain as it includes low maintenance cost.

1.8 Stakeholders

The major stake holder of this project is Bank Managers, CEO and Director of the bank. But Marketing team and Strategy building team is also a stake holder of application as well as Loan department.

This project will be beneficial to the bank to understand the customer and get more customer based analytics and detect customer behaviour and evaluating the customer applications for loan using AI and ML Models.

1.9 Technologies used in the Project

- Python Complete project done in python is the primary programming language. Apart from python R programing is used for data cleaning in some ML model.
- For Representation purpose HTML5 and W3 CSS as CSS library is used.
- For Analysis NumPy and Pandas library is used.
- For Graph plotting Matplotlib and Seaborn is used.
- For Map Folium is python library is used.

Chapter 2

System Workflow

Process: -

1. **Data Generation**
2. **Data Cleaning**
3. **Data Preprocessing**
4. **Data Analysis**

1. Data Generation:

Before generating data, I discuss this project topic with Bank manager to get more details. According to their guidance I generate the data using python random function. All the data stored it in CSV files.

2. Data Cleaning:

For data cleaning, I have different date formatted dates so I want to split the date in three different columns, day, month, year I split date using pandas and lambda function in python.

3. Data Preprocessing:

After data cleaning, data aggregation take place it means grouping the data, calculating mean and frequency count from data. This process makes easier to day, today analysis. For data preprocessing I used pandas and NumPy libraries.

4. Data Analysis:

After data preprocessing, we get summarize data in dataframe format. So, it is not much effectively understandable as compare to graphical format. According to the dataframe format I choose appropriate graph to represent it, for representation in graph I used matplotlib and seaborn library. After that I want to represent it on web so I used HTML5 and CSS.

Chapter 3

System Interpretation

- **Overview**
- **Saving Accounts**
- **Current Accounts**
- **Loan Account**
- **FD Accounts**
- **RD Accounts**
- **Debit Transactions**
- **Credit Transactions**
- **Services**
- **Insurance**
- **Gold Investment**
- **SIP Investment**

- **Overview:**

In overview first we show the current status of the bank. It means we count total saving accounts, current accounts, FDR accounts, count of insurance sold, and Gold and SIP investment doing by customers.

I also represent the geographic location of each branch in a map, also show each region contribution in the bank in tabular form.

It also shows the current stock state in graphical format in timeseries graph (randomly graph plotting because web scaping is not allowed and it is illegal for stock market).

I also show the upcoming business year's targets.

- **Saving Accounts:**

In Saving Account, we are grouping the data in region, gender, year, month and day. We also categorize the data based on their basic details like having a car, having a home, having a bike and their education and many more.

Based on this categorical data we plot analyze the customers and their needs more efficiently. Based on their details we can predict when and at what time the customers want loan from us and other services like Insurance, SIP Investment etc. We also find out some amazing facts about top five cities which have maximum CASA deposit. We also find according to the age group how much account balance they have and also, we find at what age customers are opening their account in our bank. It helps us to target the customers by age group.

- **Current Accounts:**

In the current account customer is a businessman. So current account doesn't have any rate of interest unlike saving account. In current account we are grouping the data in region, gender, year, month and day. We also categorize the data based on their basic details like occupation. We find out some facts like maximum net worth by occupation.

- **Loan Account:**

In loan account we classify it by region, gender, purpose, rate of interest and also by tenure and mortgage type. We find some amazing facts about the people that is what region pays maximum EMI and which region has maximum loan distribution.

- **FD and RD Accounts:**

It is classified by region, gender, purpose, and also by tenure and loan taken against FD and RD. It is also classified as per maturity date also. So, we can set the target for a particular year. We also find the facts about the region which had maximum FD and RD amounts

- **Debit and Credit Transactions:**

We monitor Debit and Credit transactions by sources like cash withdrawal, cash deposits, NEFT, RTGS, Rupay Debit Card and UPI etc. we also monitor the transactions by month, year and date. So, we can plan which day and month is having more load than other days, Like festival days.

- **Services:**

We also do analysis on services availed by bank customer, we classify it by region, gender and usage of each service.

- **Insurance:**

Bank also provide insurance facility to their customers; we classify sold insurance by region gender and the frequent purchasing of it. Based on it we recommend the insurance to the users.

- **Gold Investment:**

Bank also provide direct gold investment plans for their customer. We classify by region, gender, amount and tenure. we find some facts that maximum amt purchased by which gender and maximum gold purchase by which region.

- **SIP Investment:**

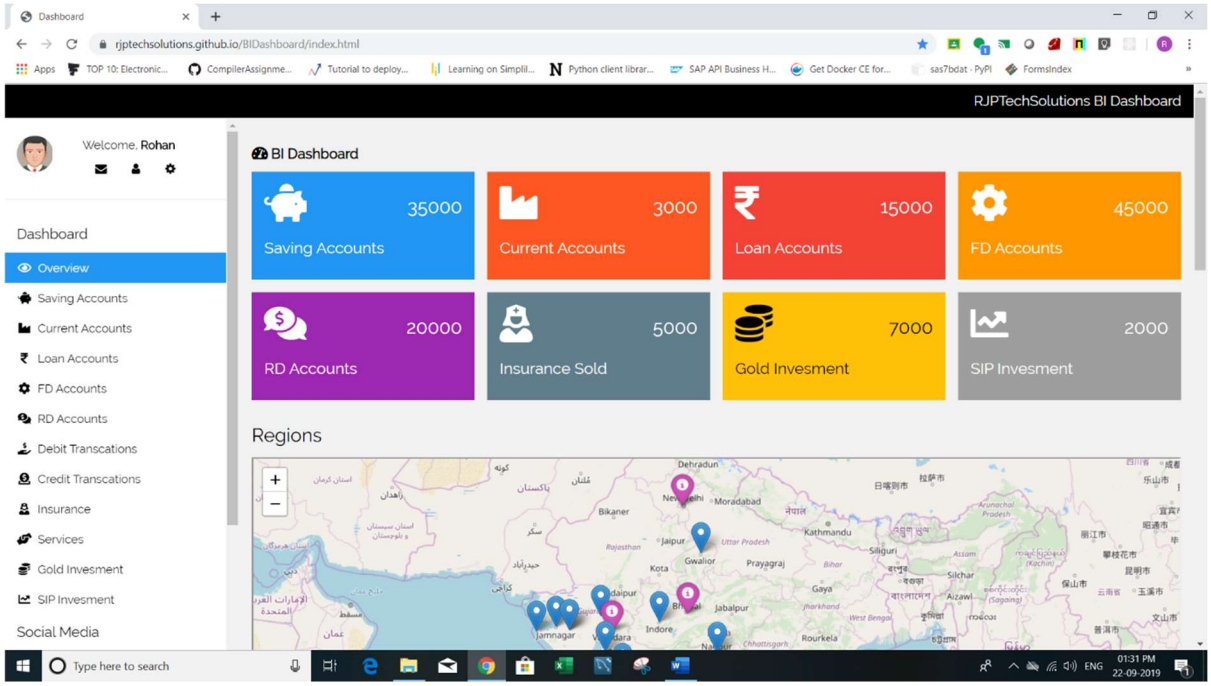
Bank also provide SIP Investment for their customers. We classify it by region, gender and tenure of it. We also find some facts that most amt invested by region and which gender prefers SIP investments.

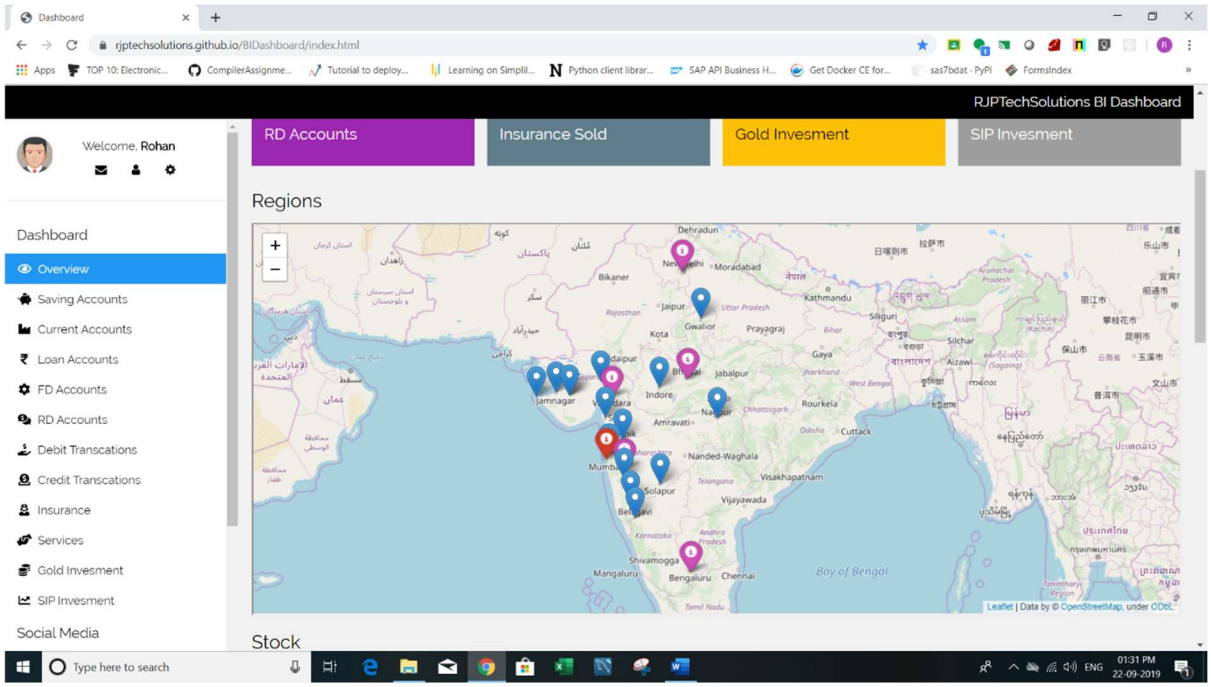
- **Social Media:**

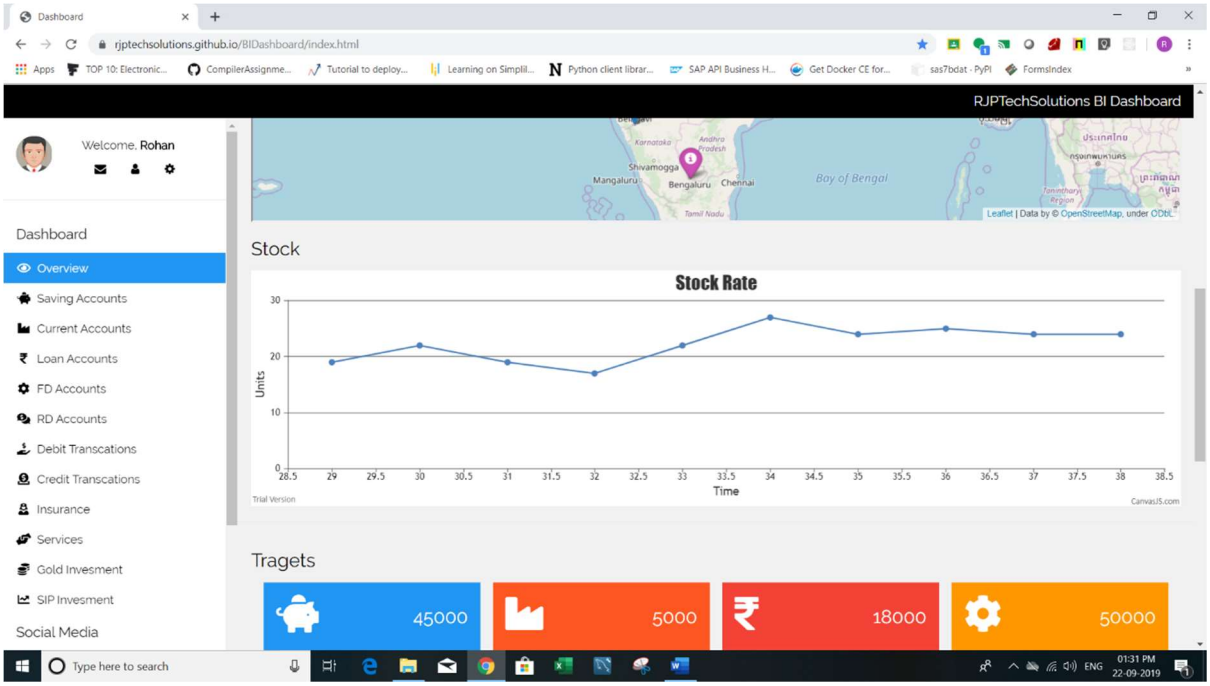
From the bank's point of view social media is a key point of marketing and growing rapidly. I don't have official API of Social Media so I just give the link of it but in future updates we can add social media handers console in these tabs.

Chapter 4
System implementation

Overview:



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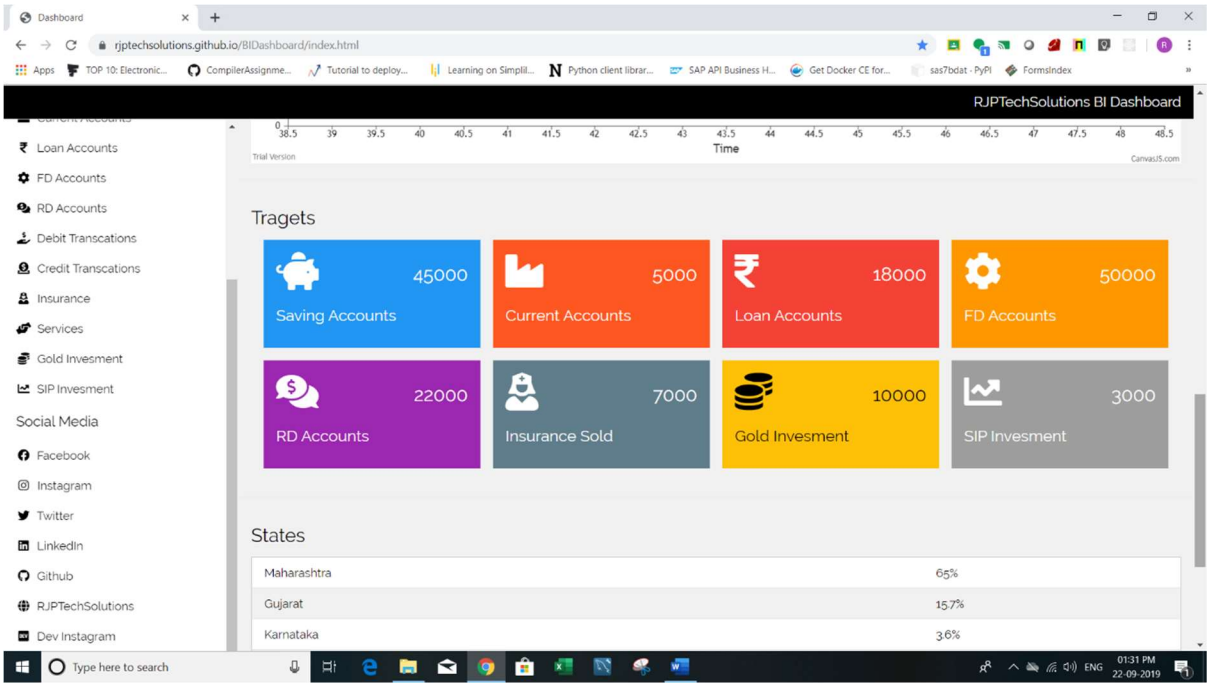
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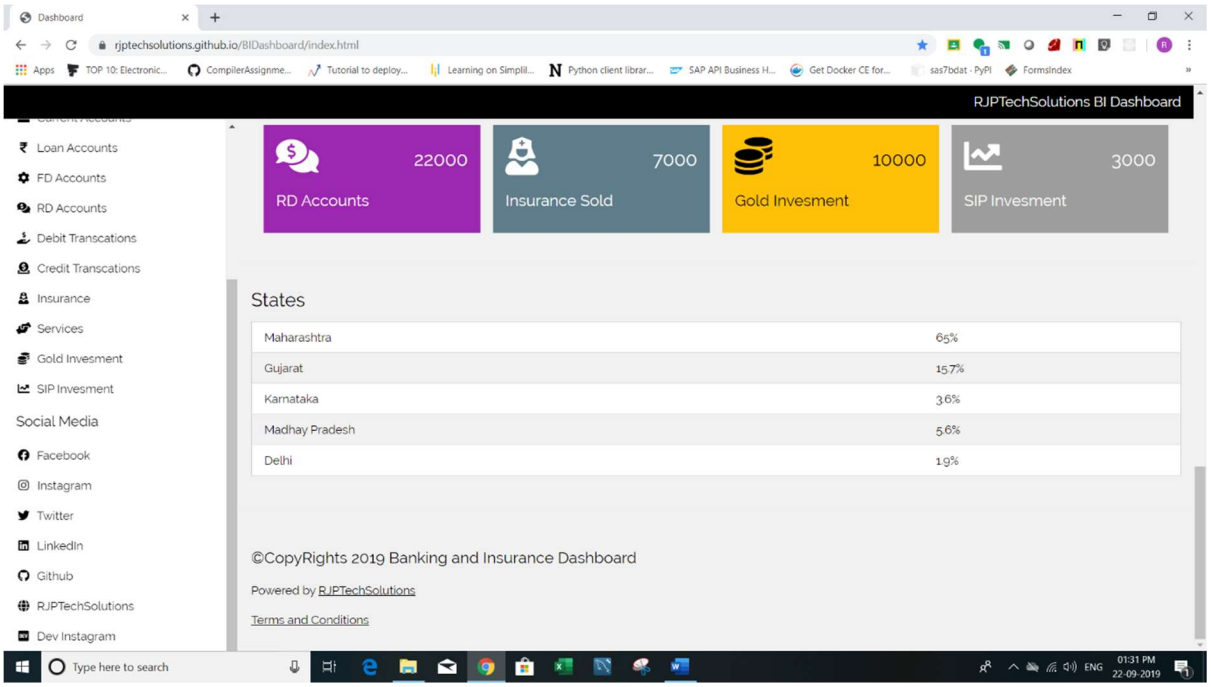
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RD Accounts
7000
Insurance Sold
10000
Gold Invesment
3000
SIP Invesment
States
Maharashtra 65%
Gujarat 15.7%
Karnataka 3.6%
Madhay Pradesh 5.6%
Delhi 1.9%
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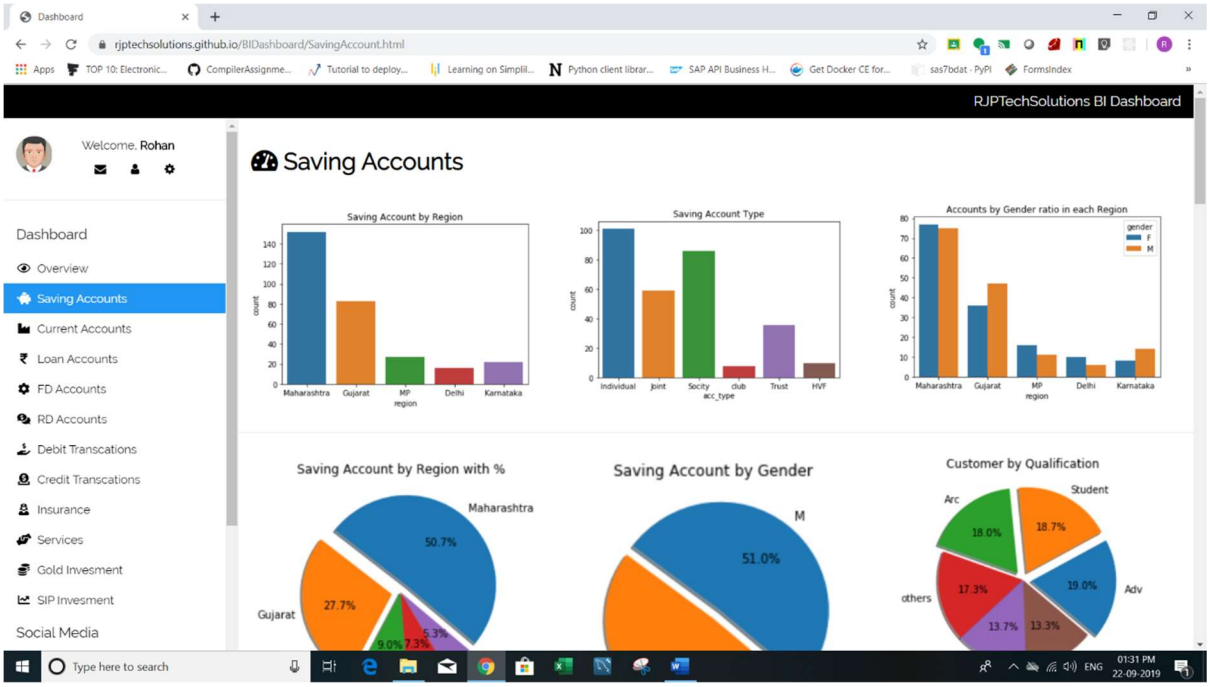

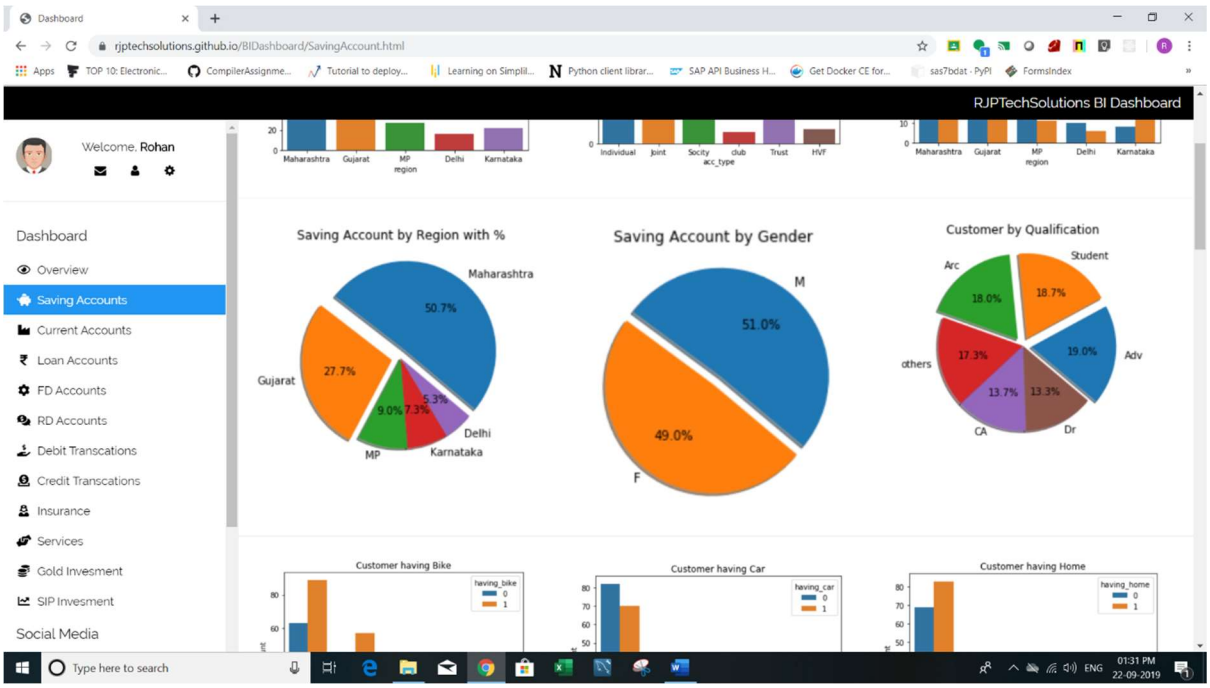

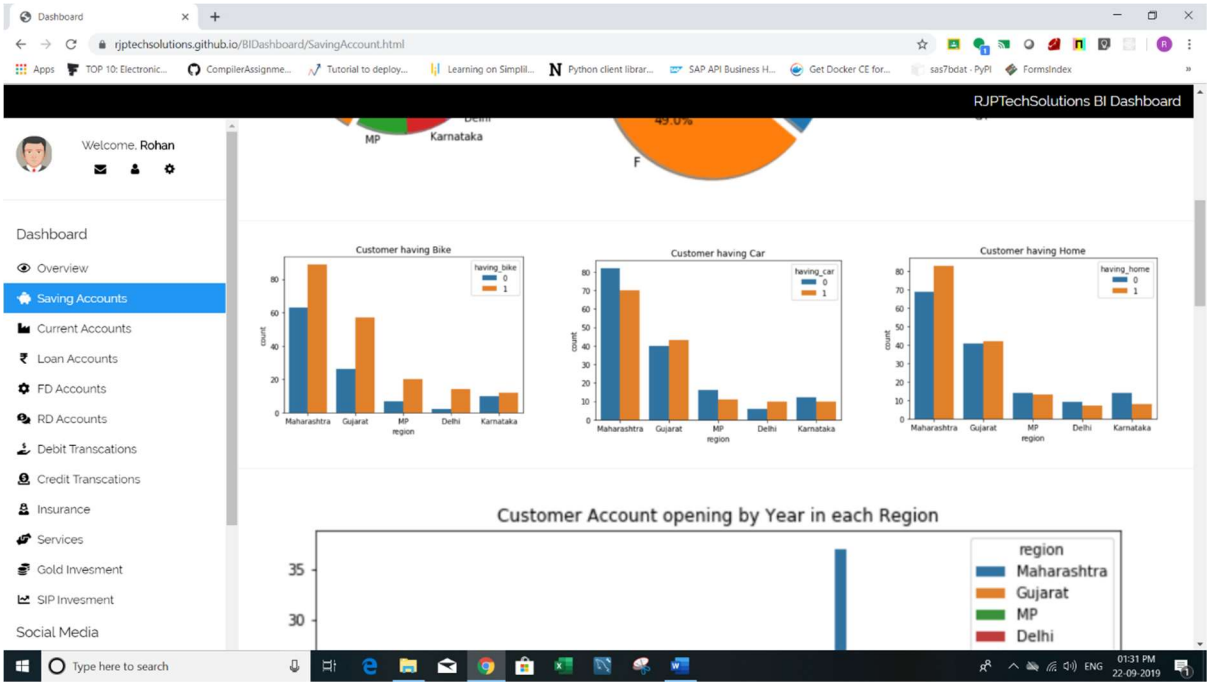
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Customer having Car
Customer having Home
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Customer Account opening by Year in each Region
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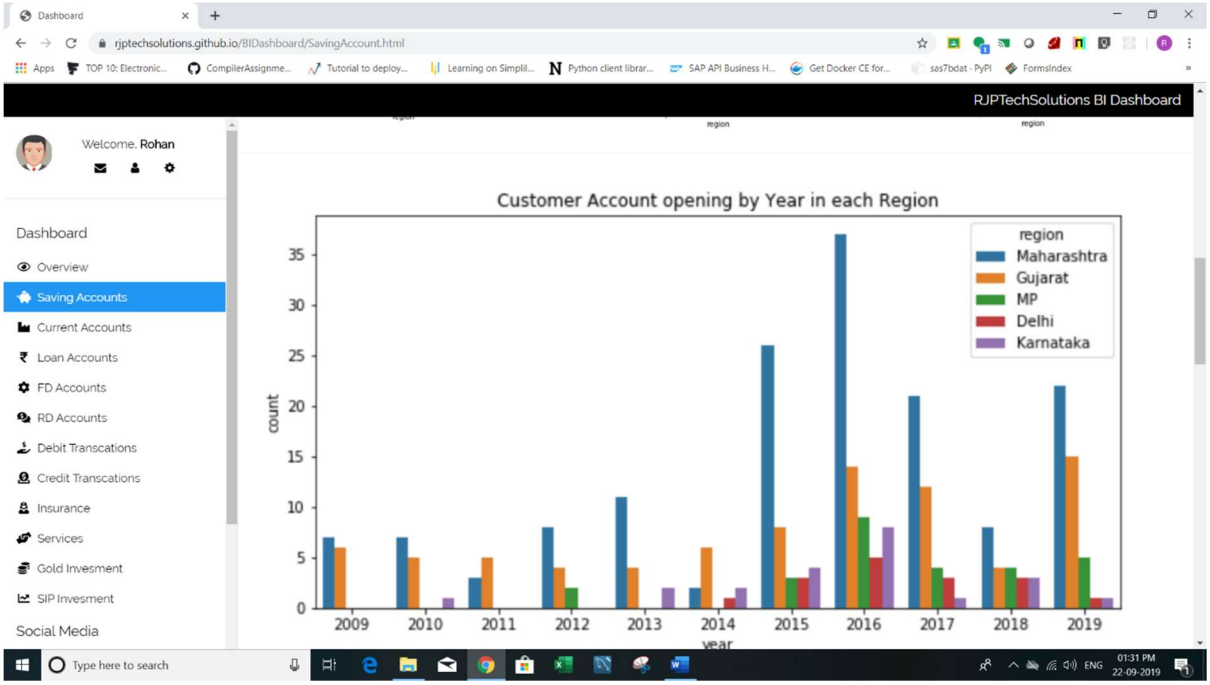
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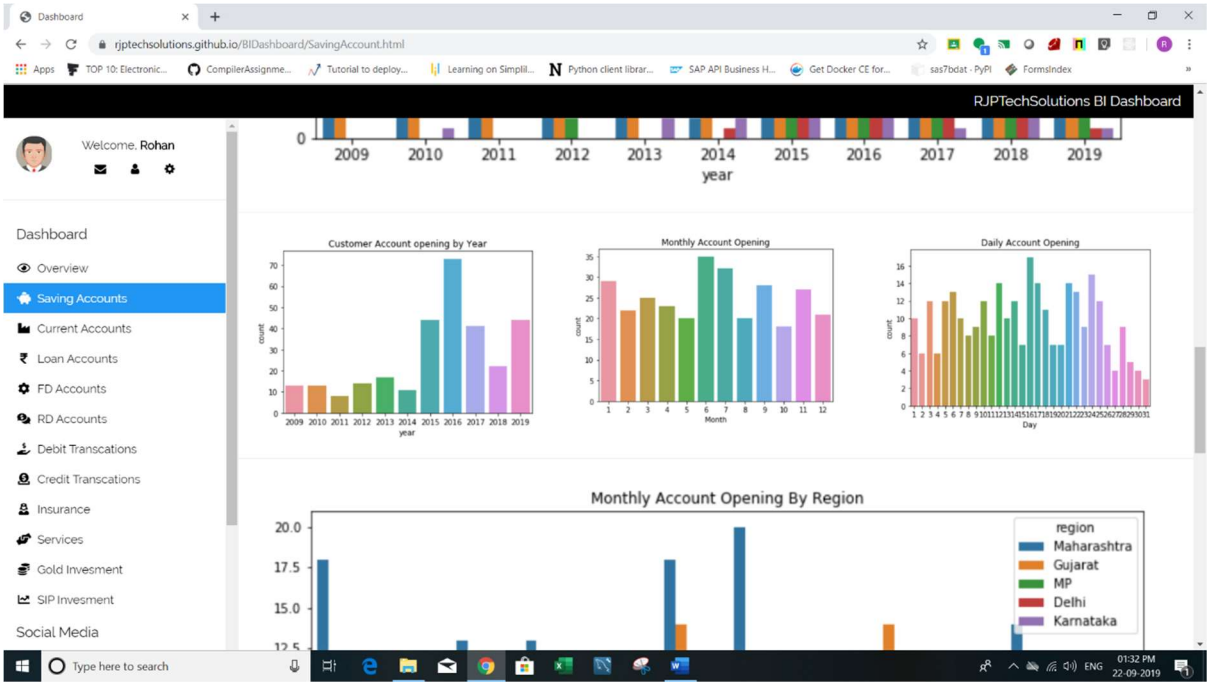
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Top cities having Hight CASA Deposit
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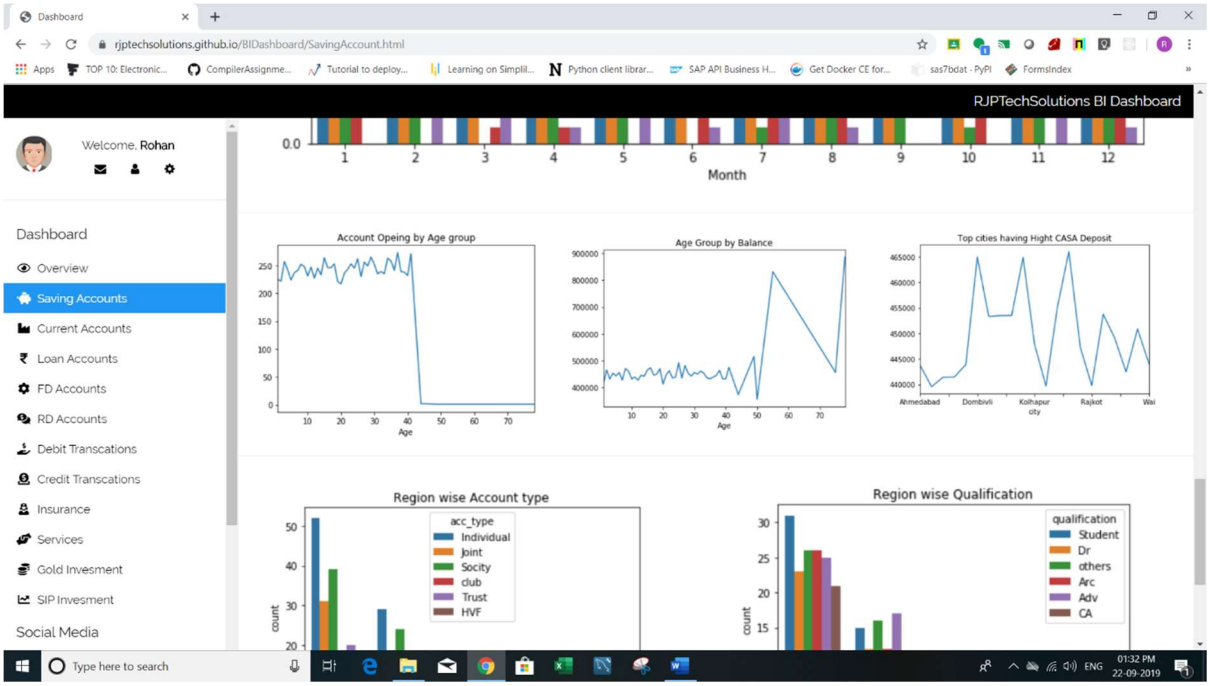
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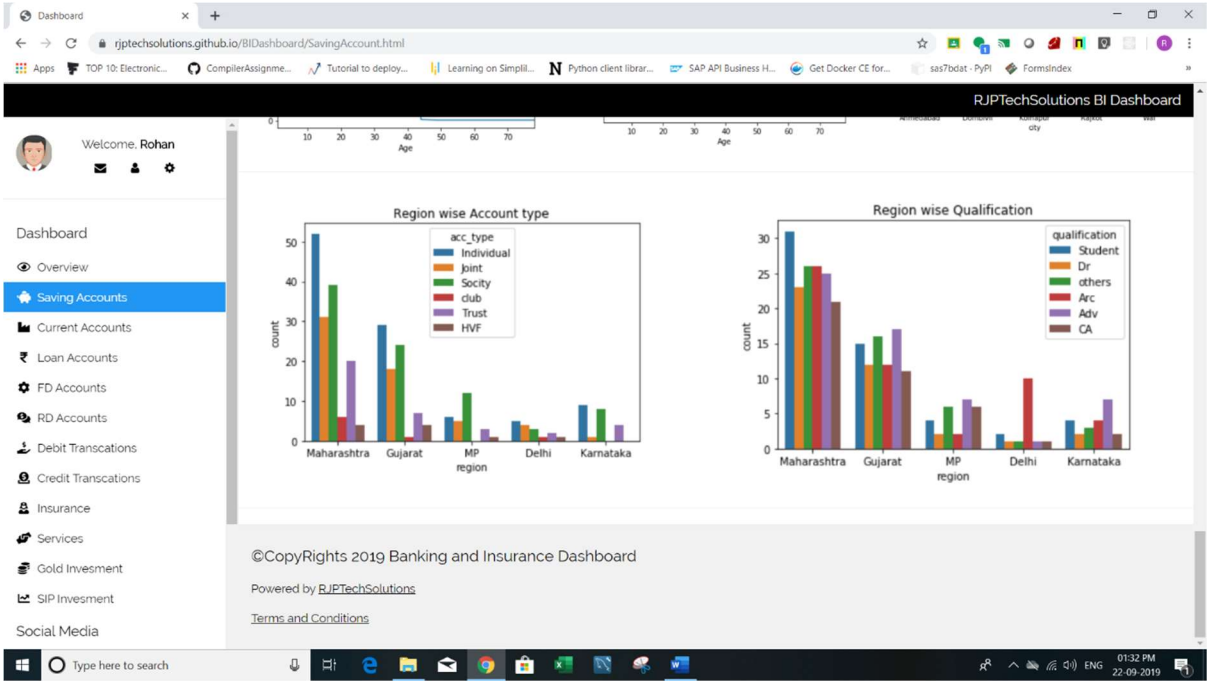
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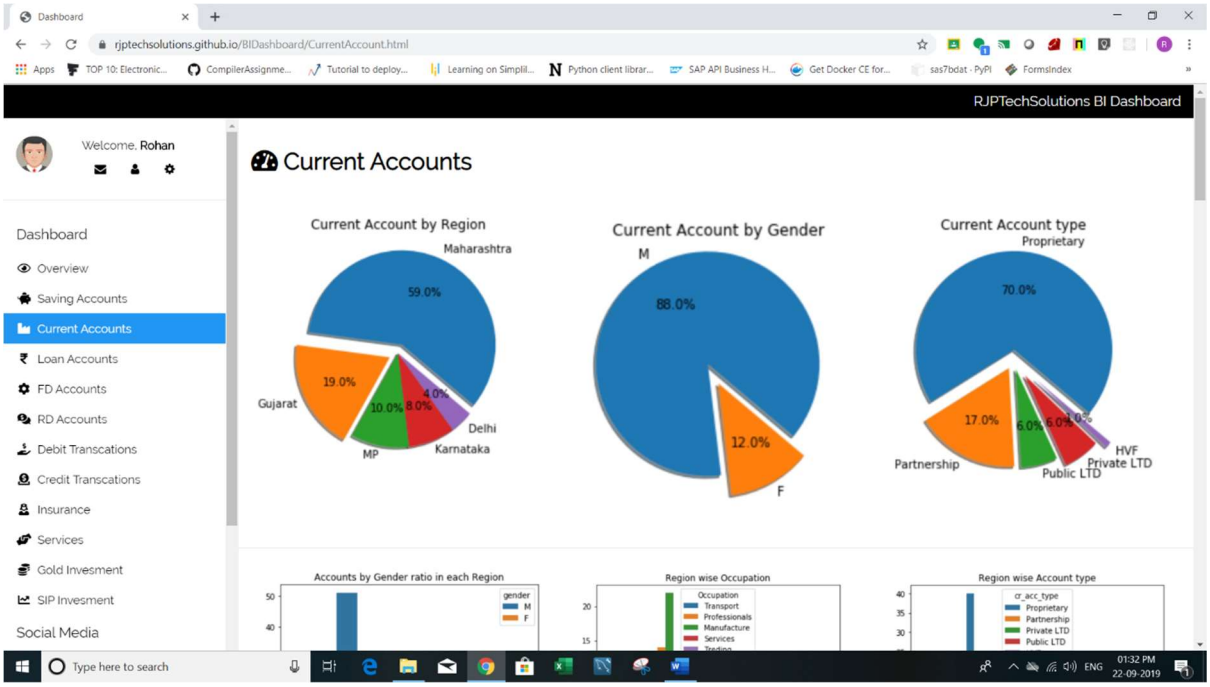

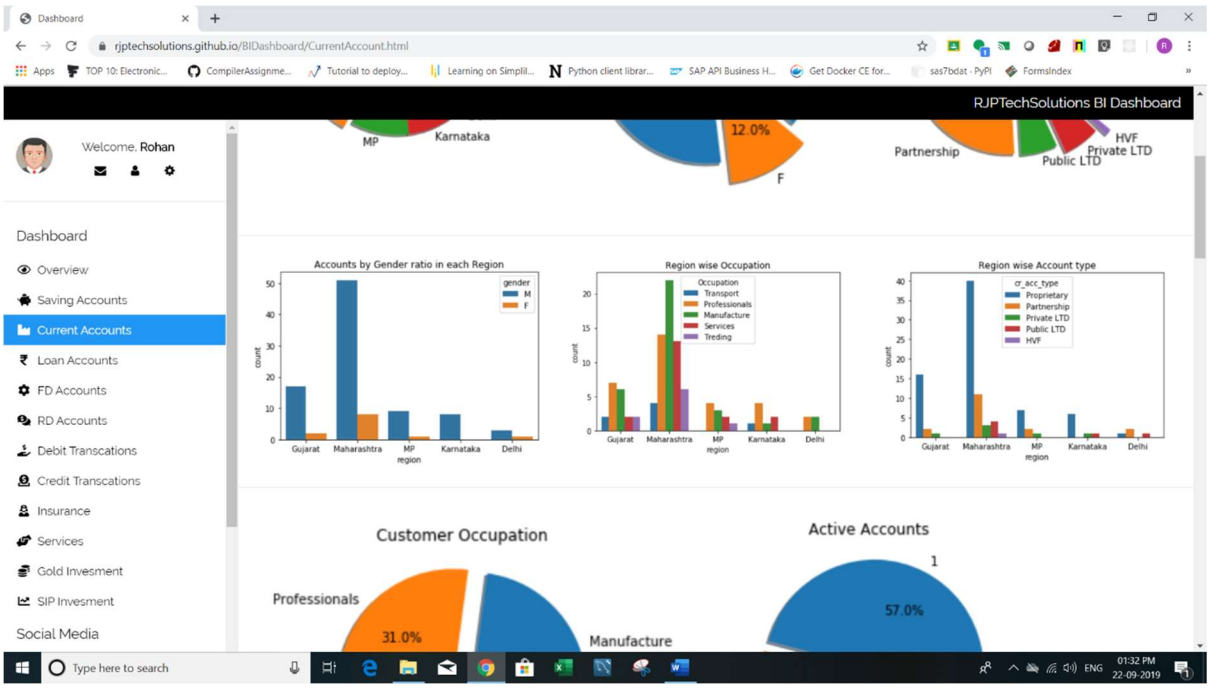

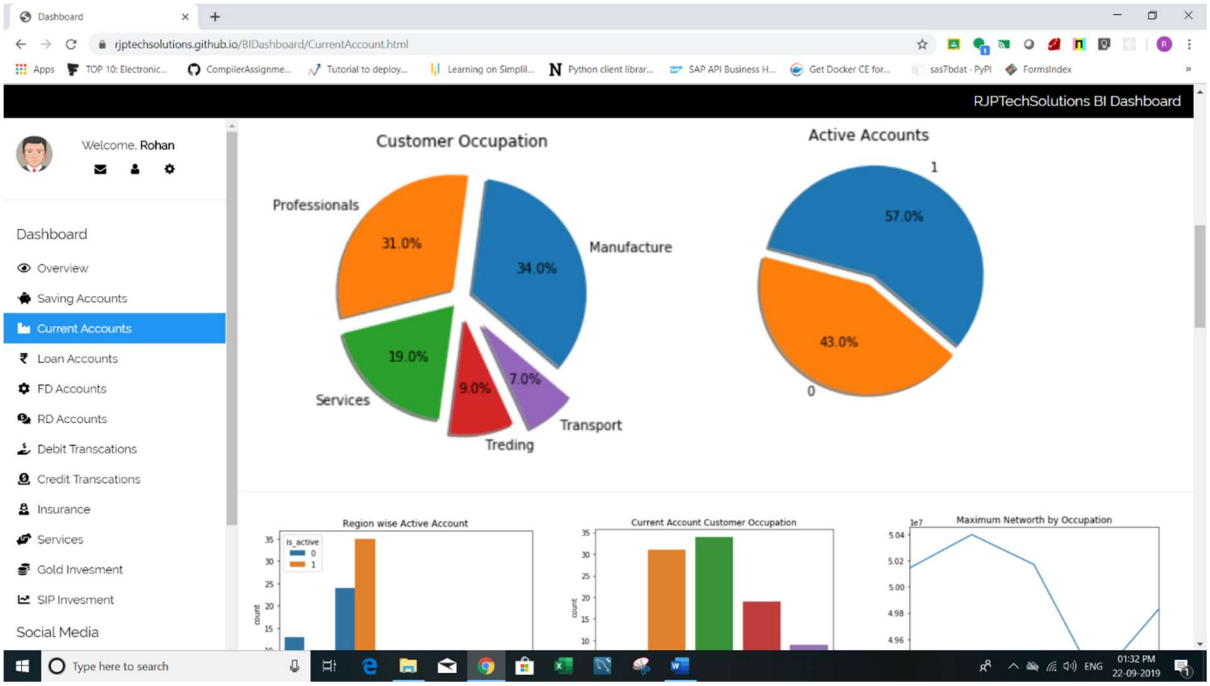
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Customer Occupation
Professionals
31.0%
Manufacture
34.0%
Services
19.0%
9.0%
7.0%
Transport
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Region wise Active Account
Current Account Customer Occupation
Maximum Networth by Occupation
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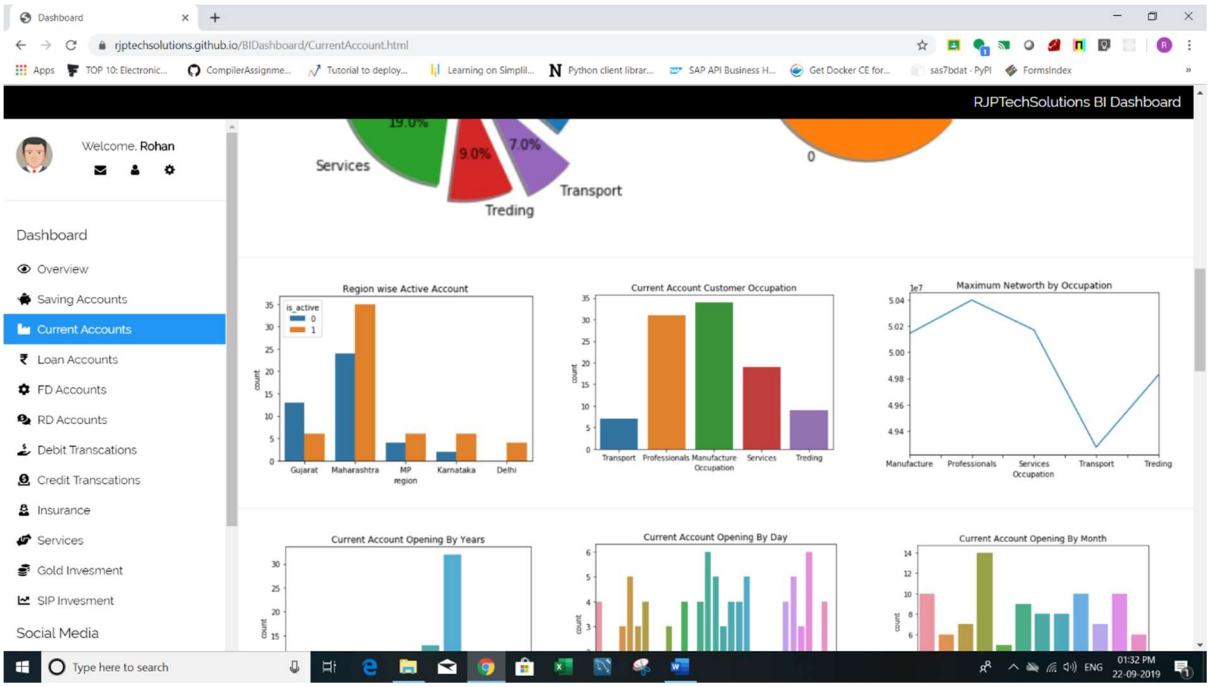
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Services
9.0%
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Transport
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Region wise Active Account
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Current Account Customer Occupation
Transport
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Maximum Networth by Occupation
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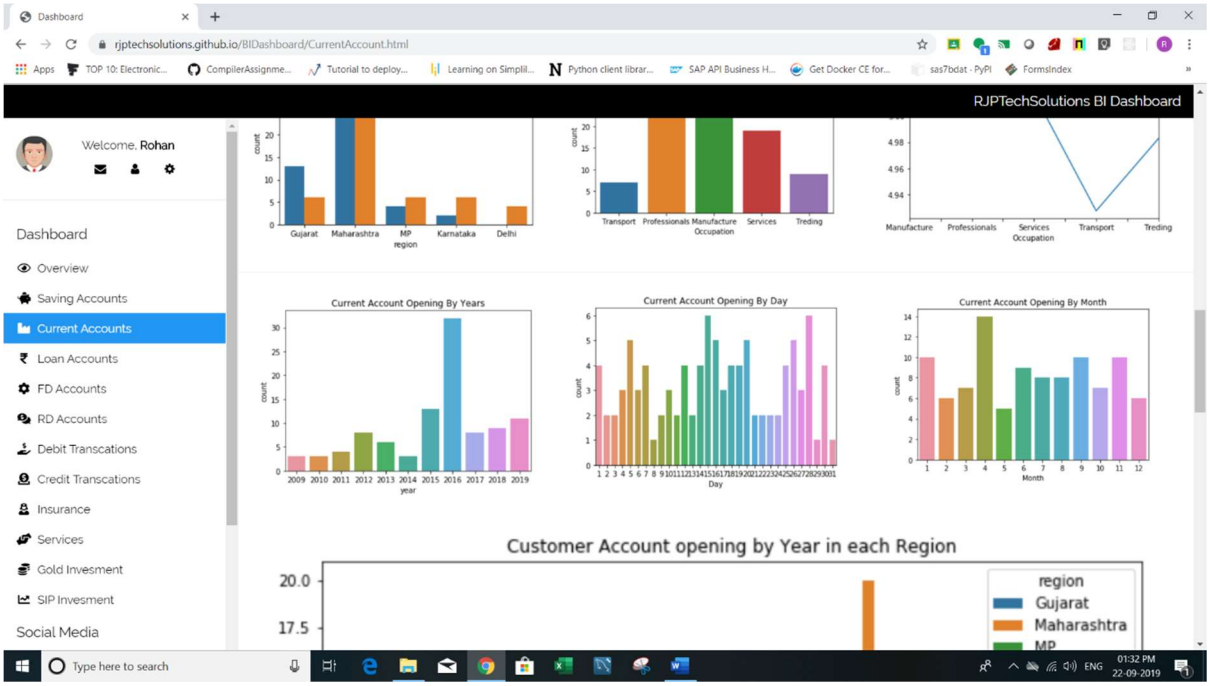
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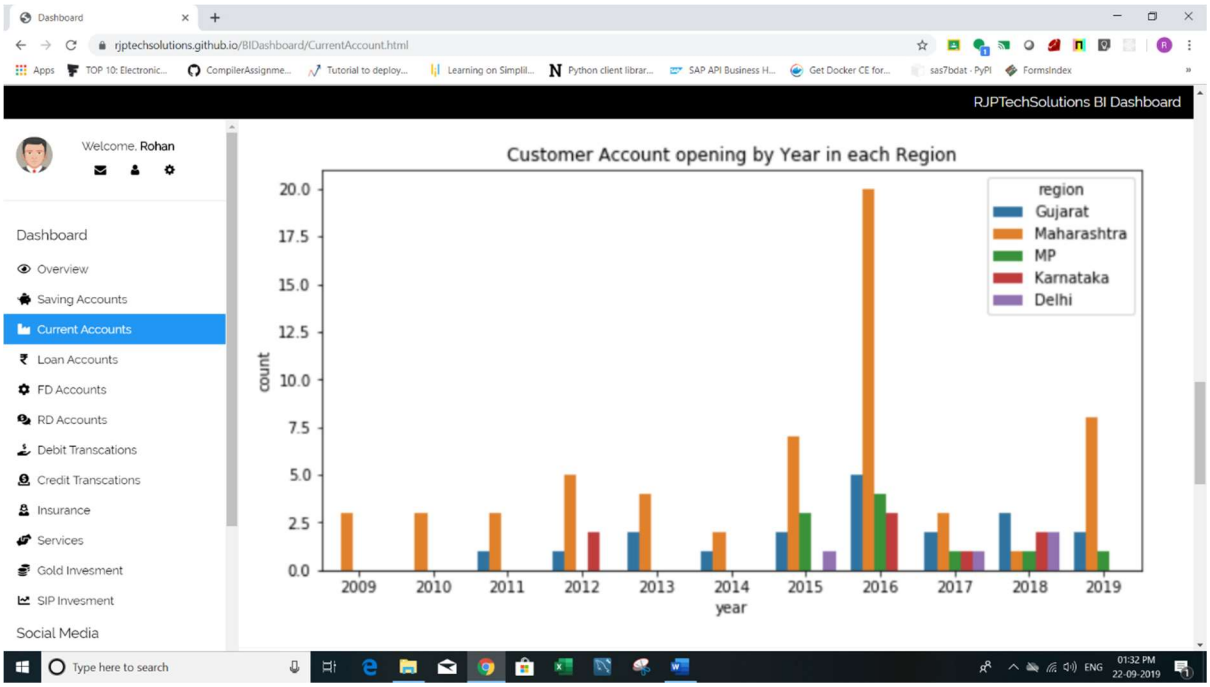
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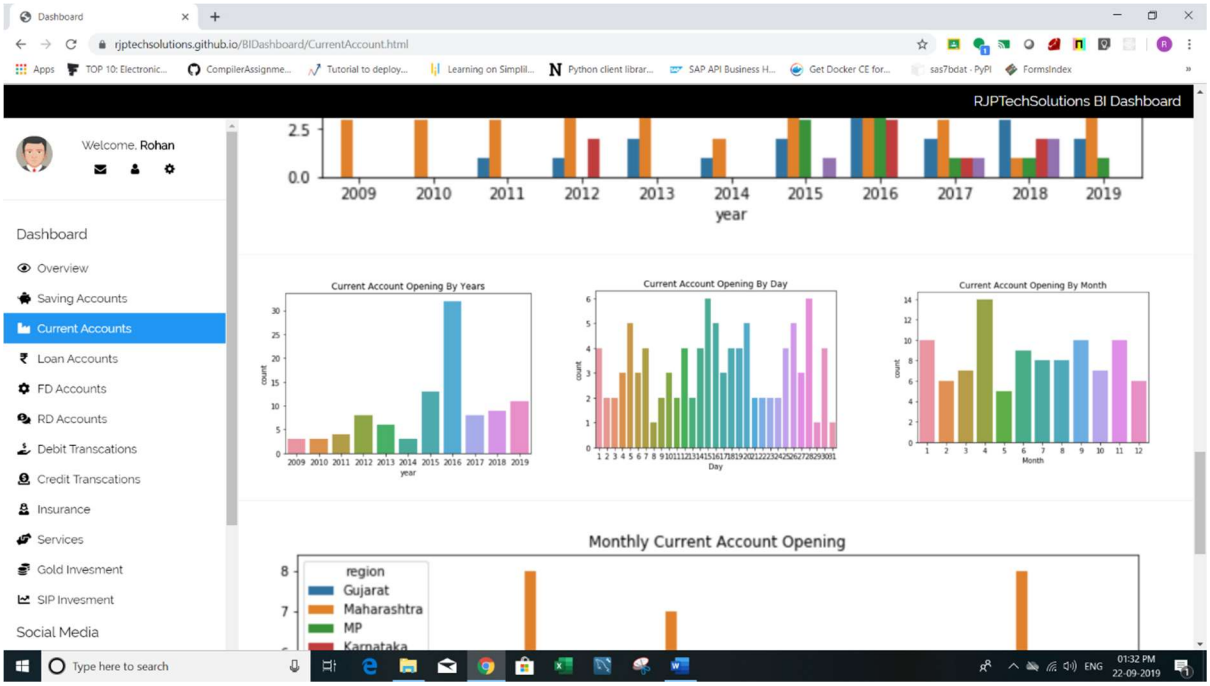
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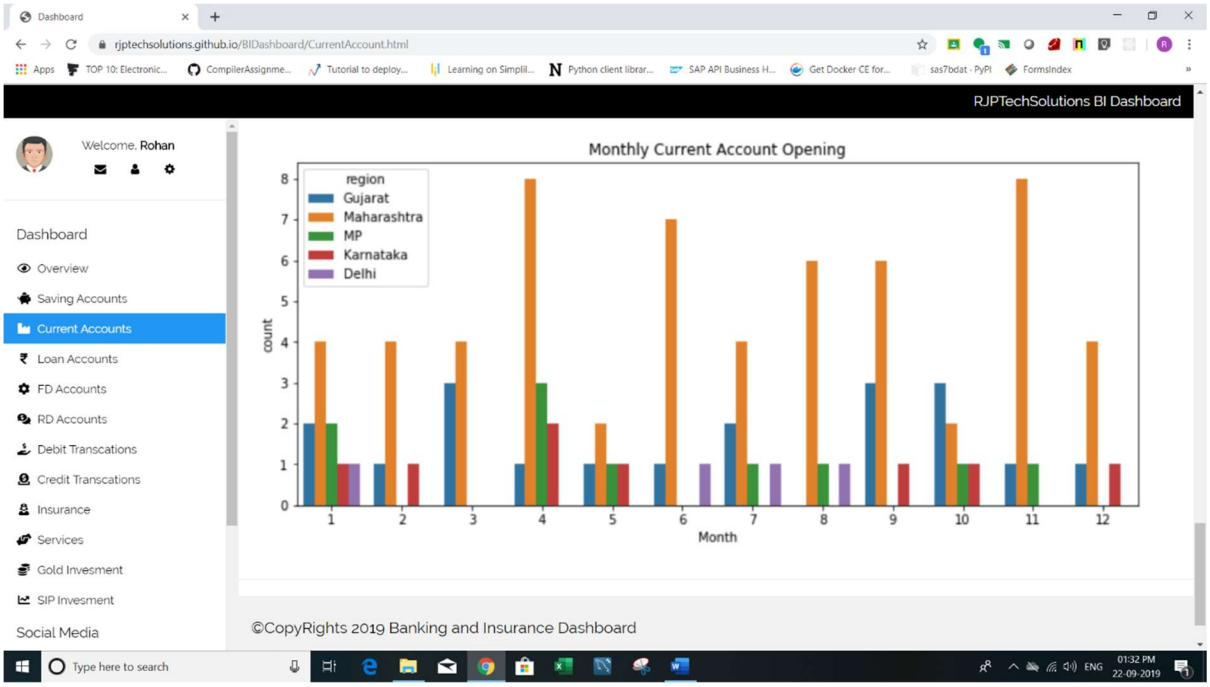
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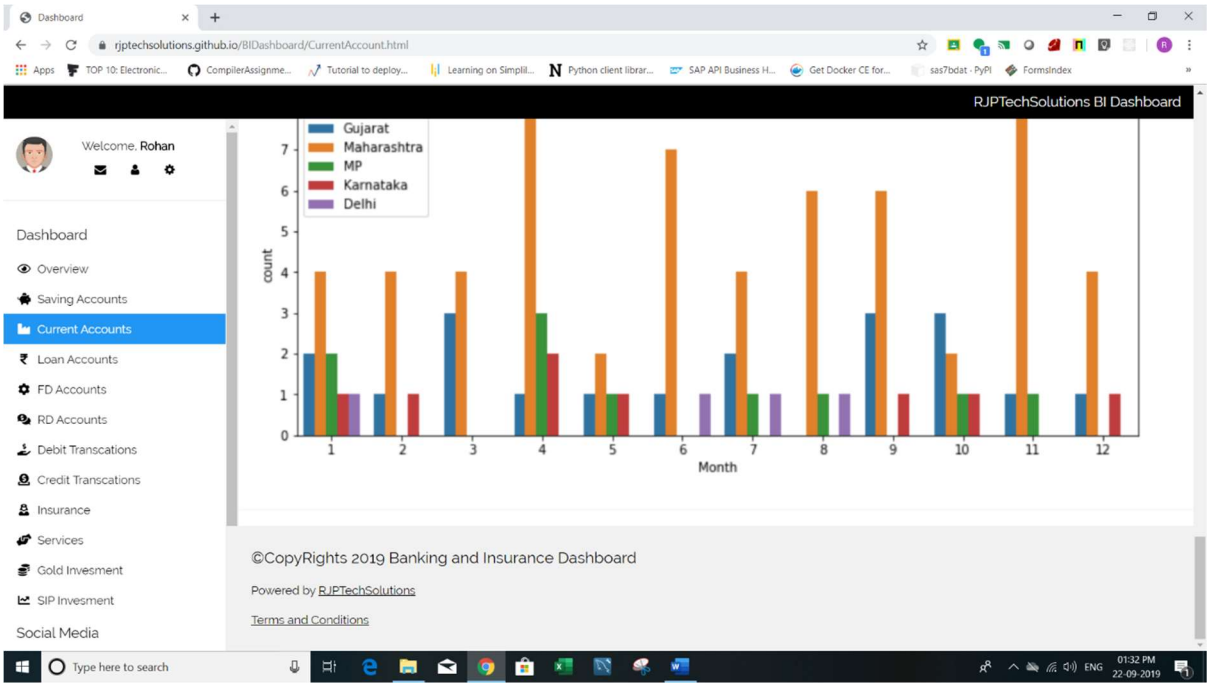
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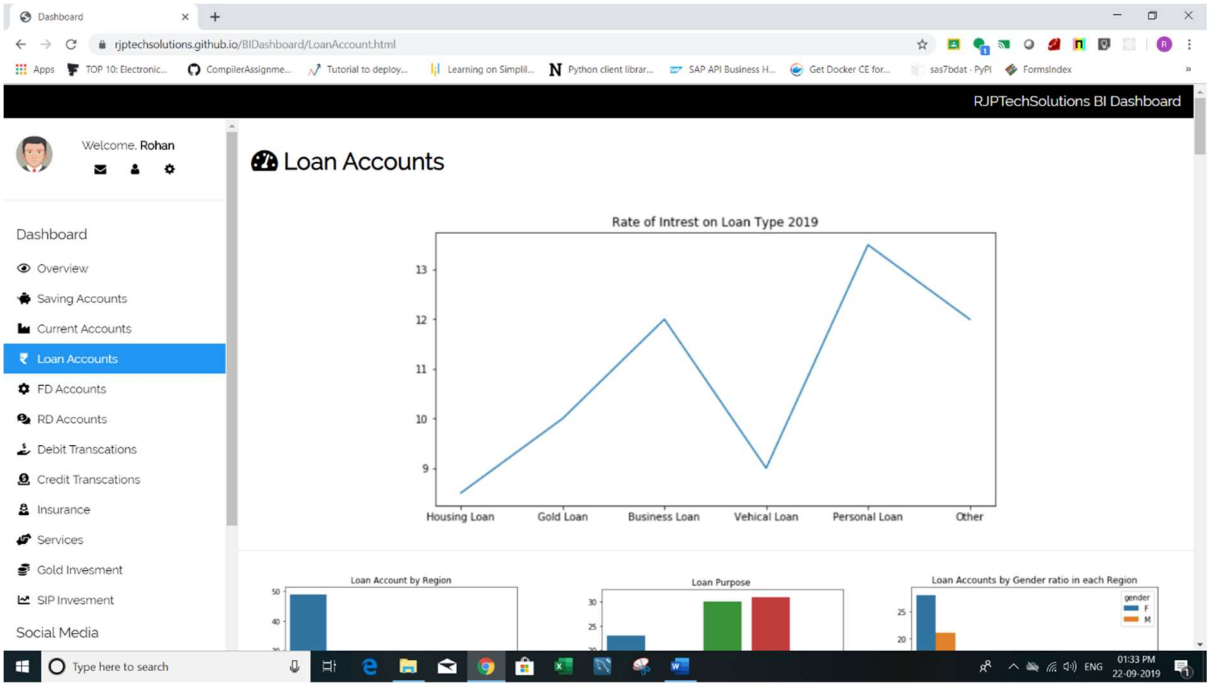

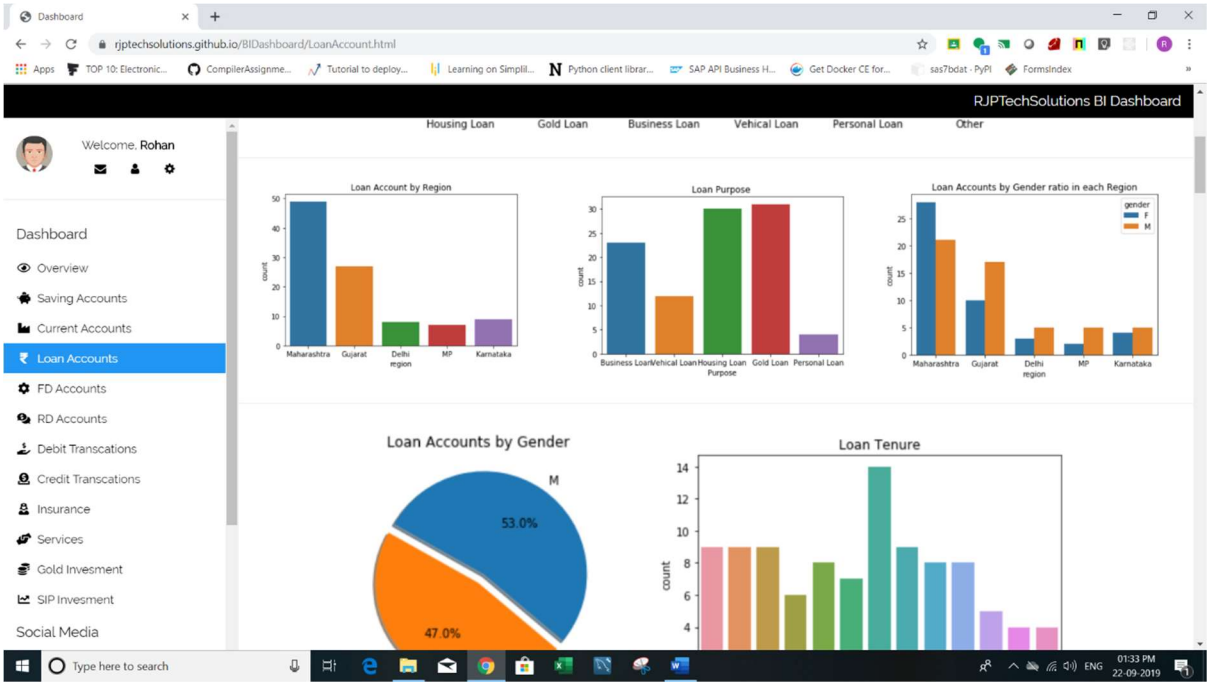

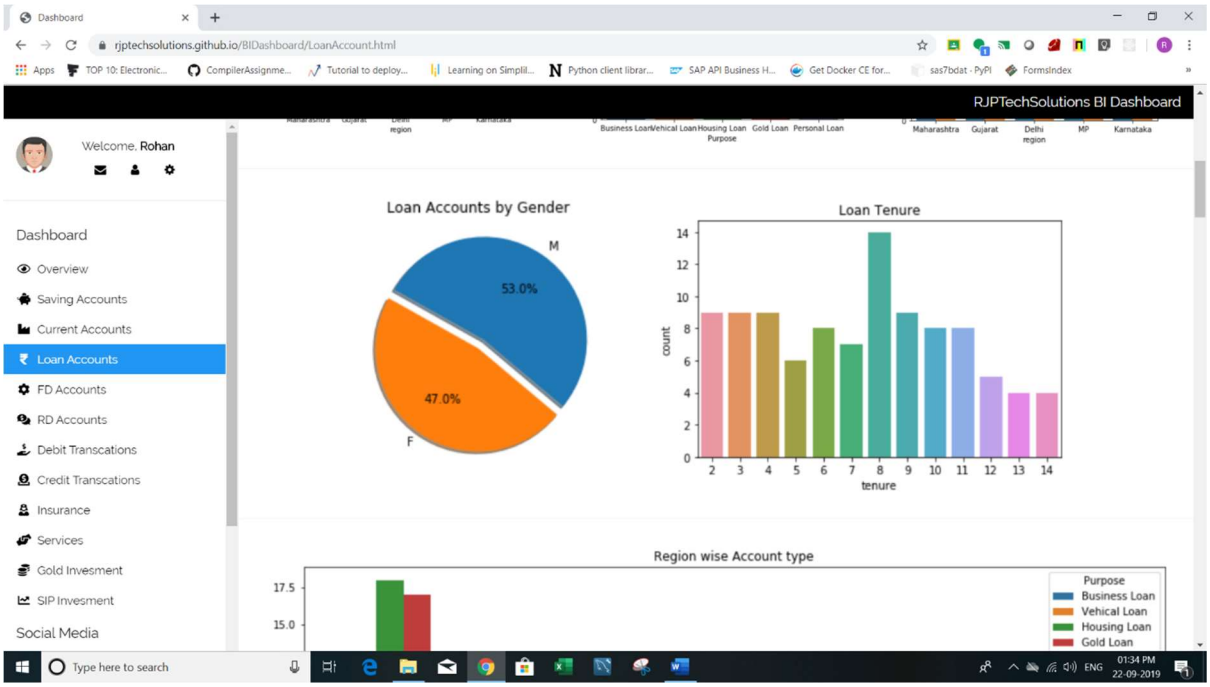
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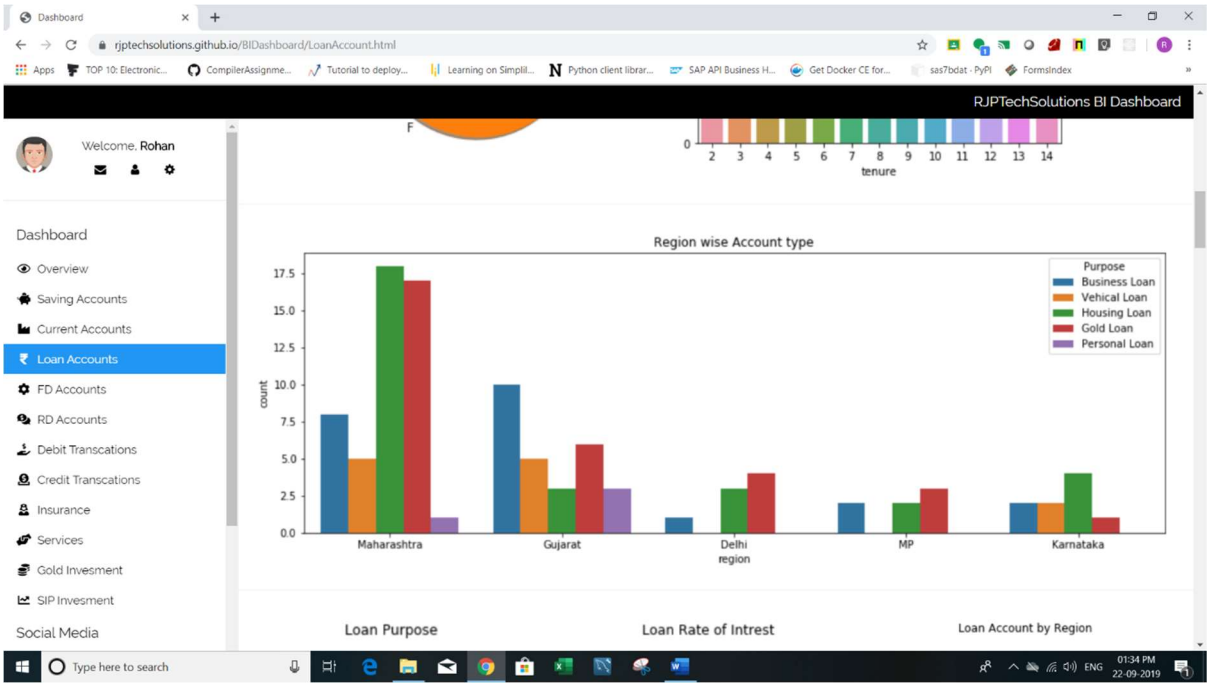
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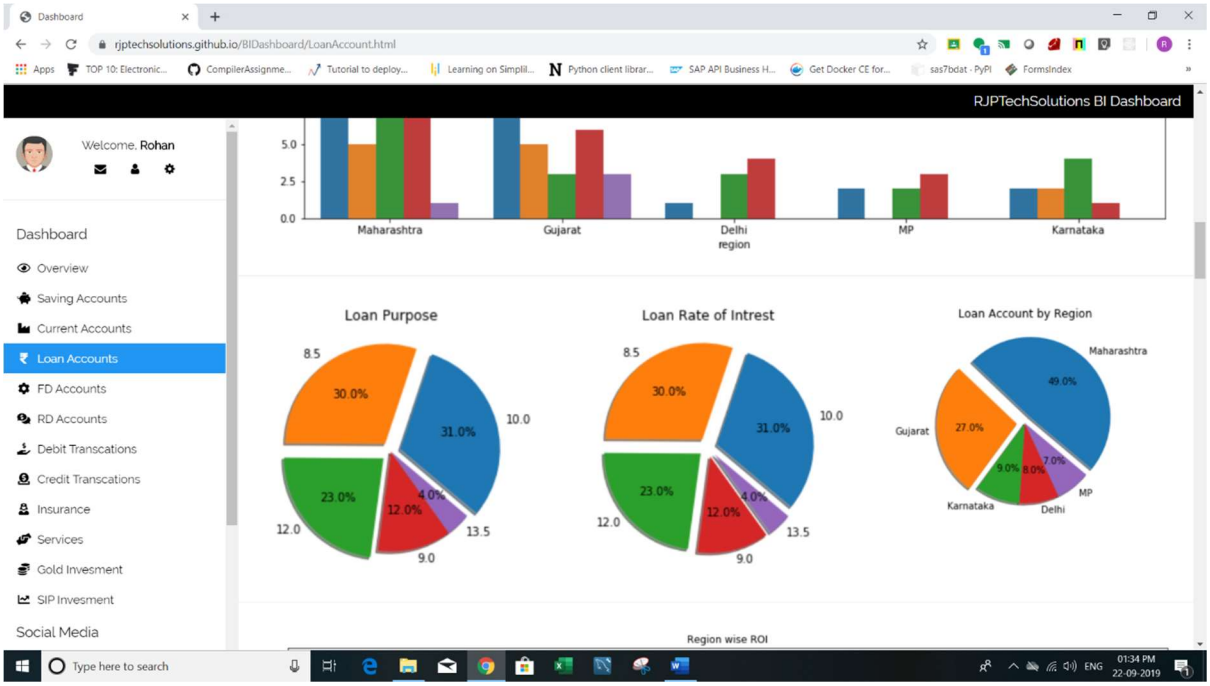
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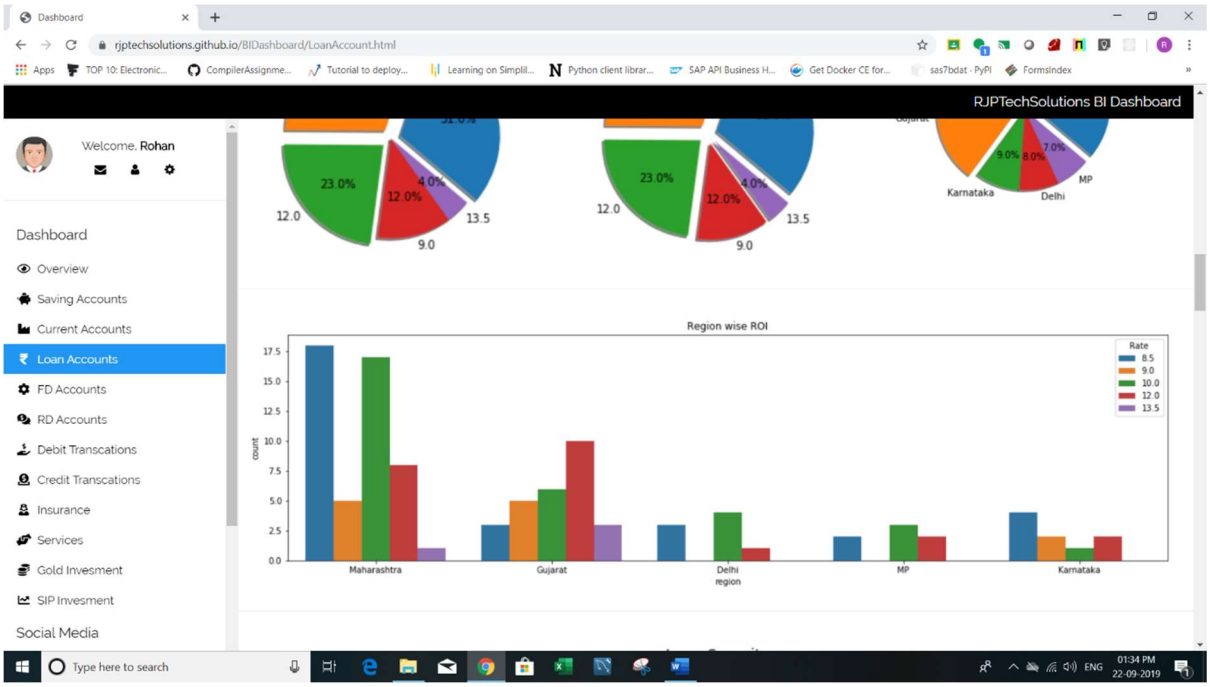
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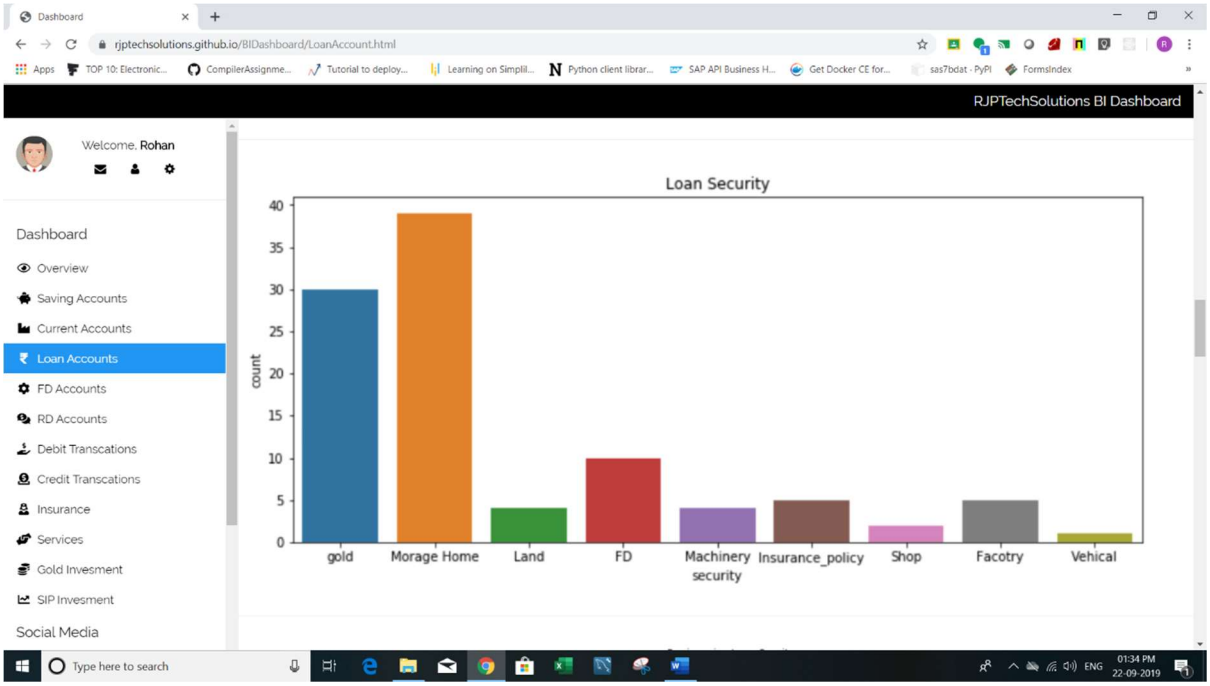
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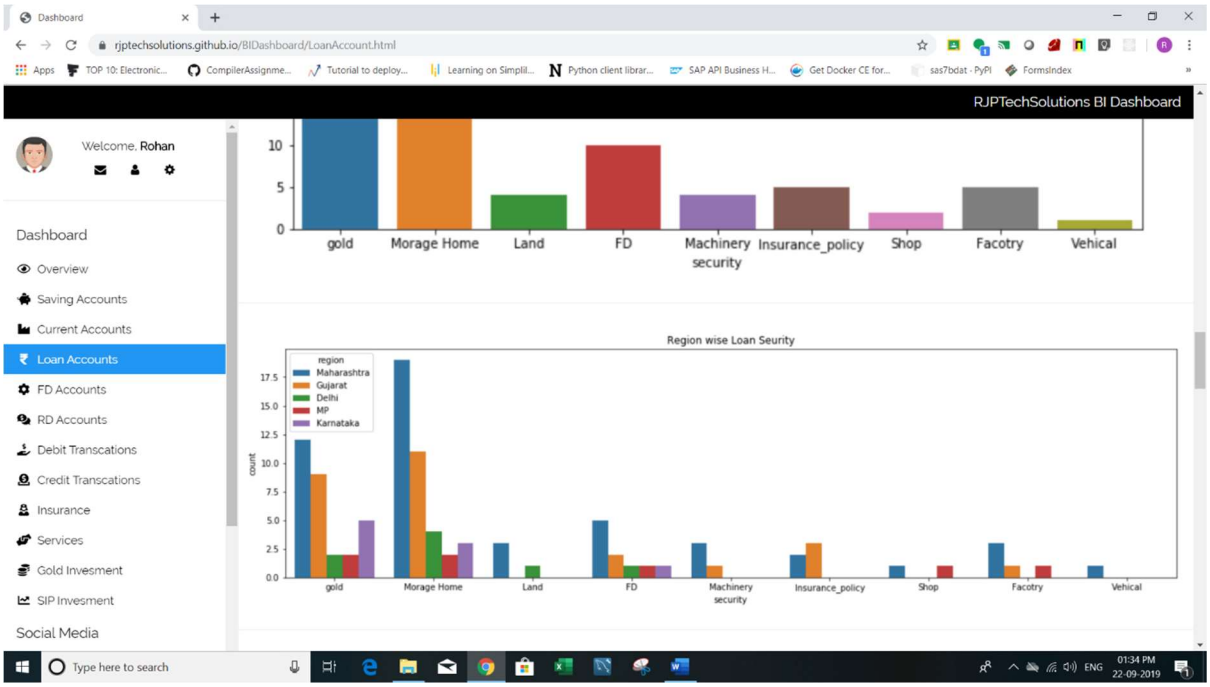
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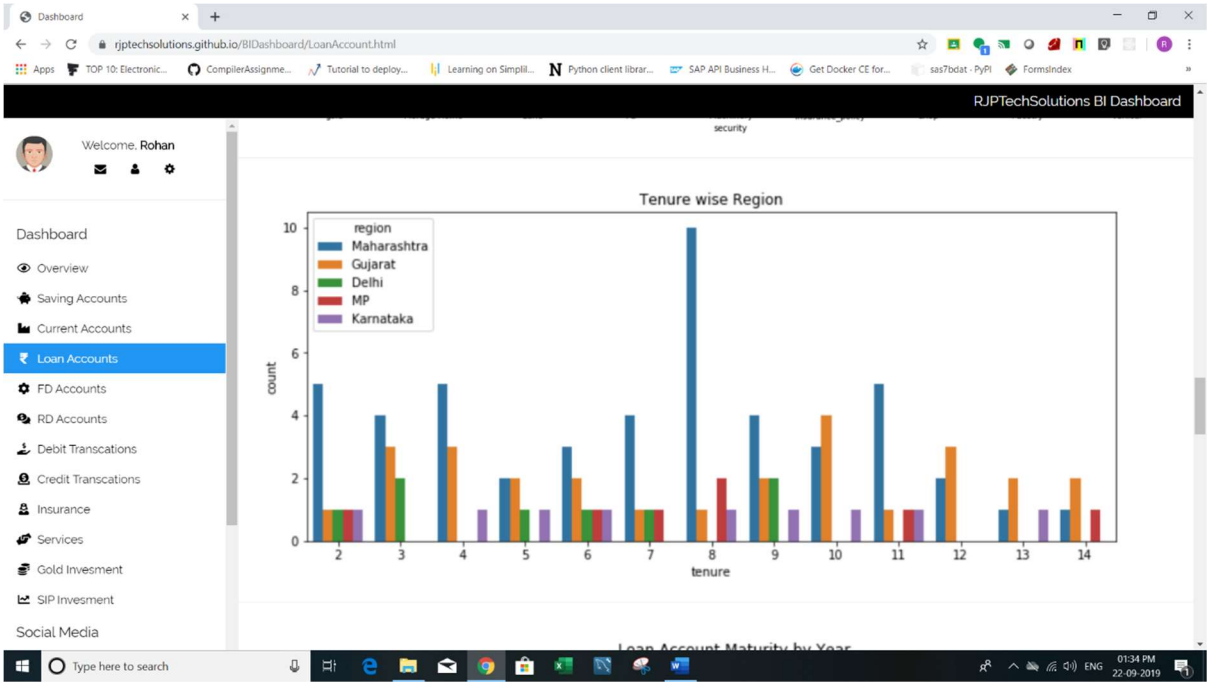
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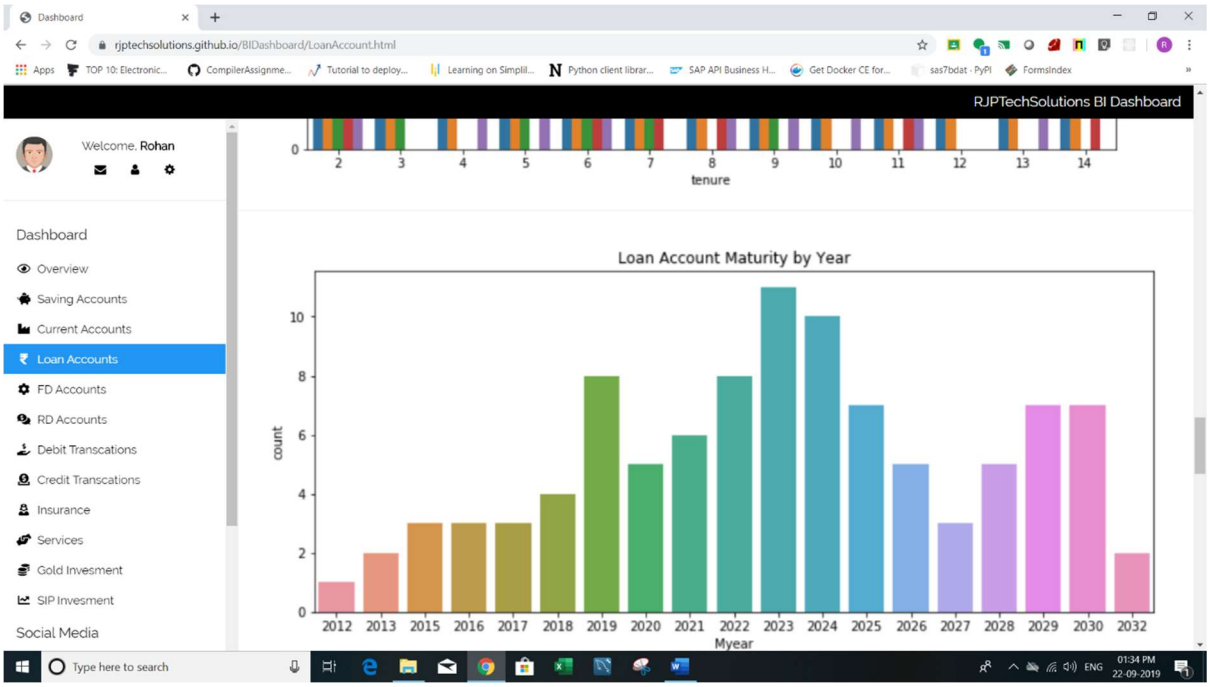
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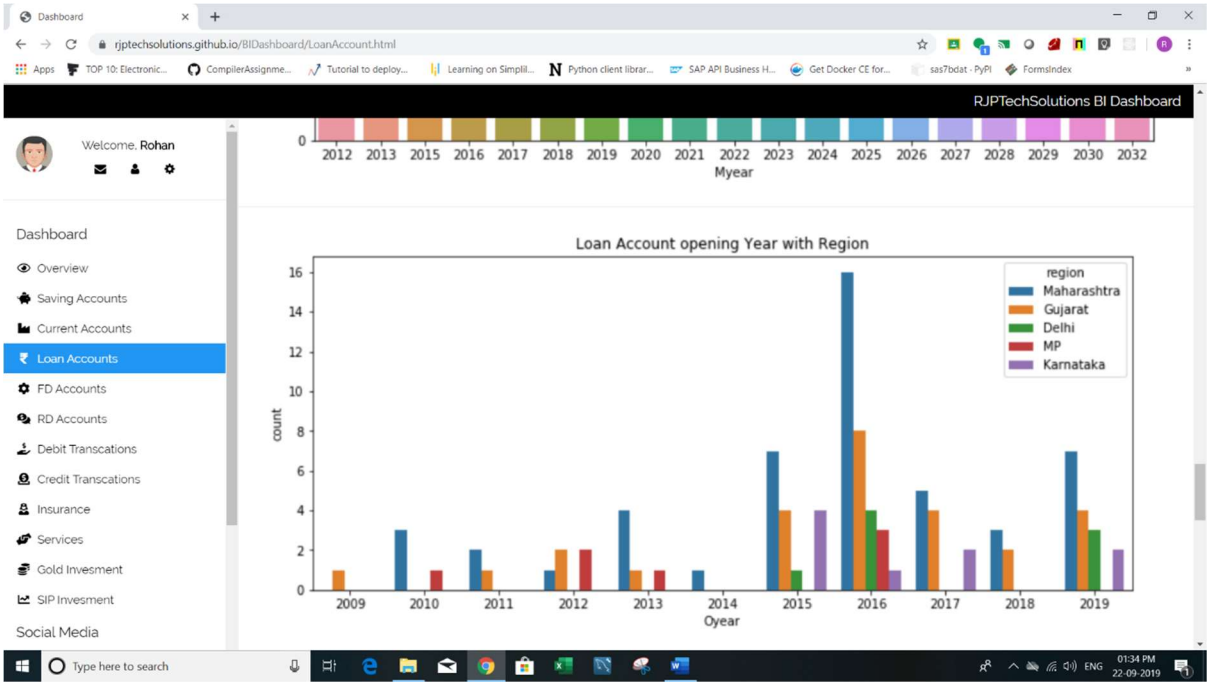
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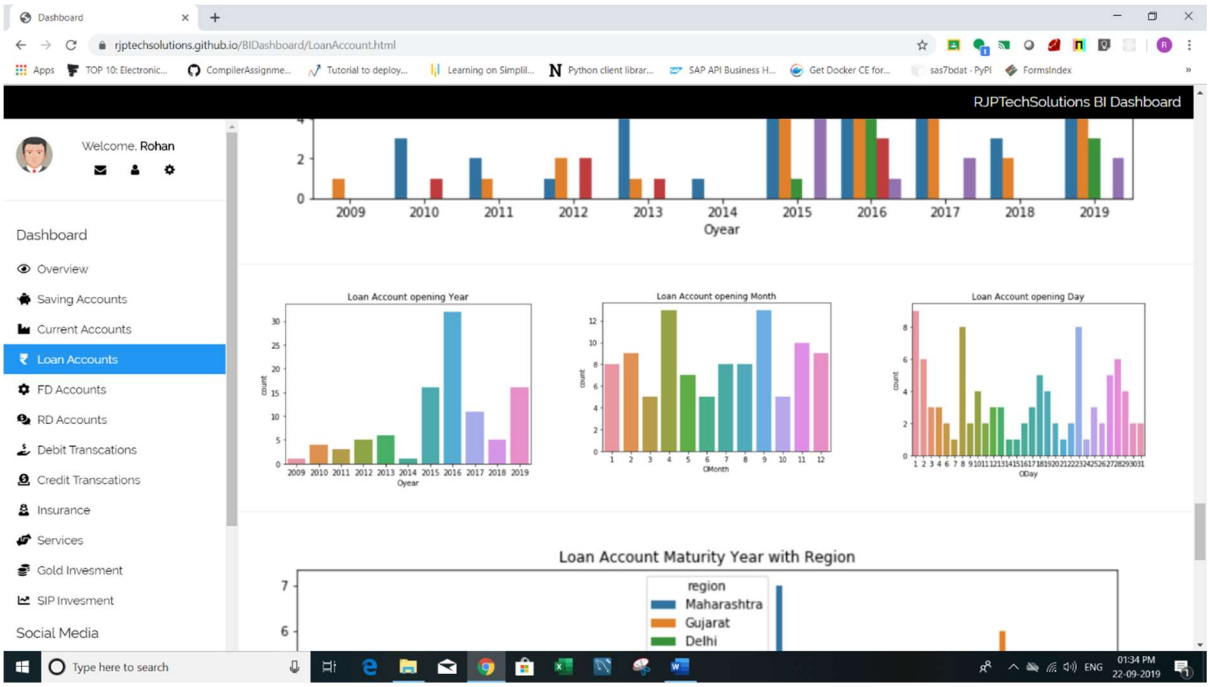
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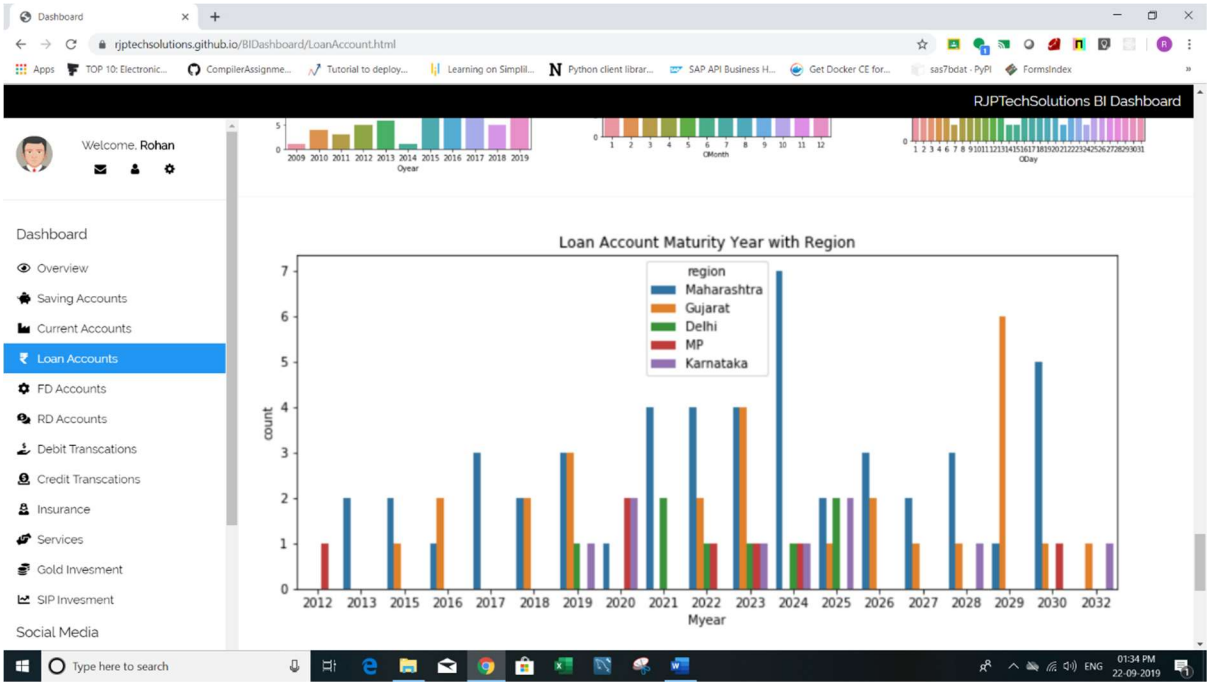
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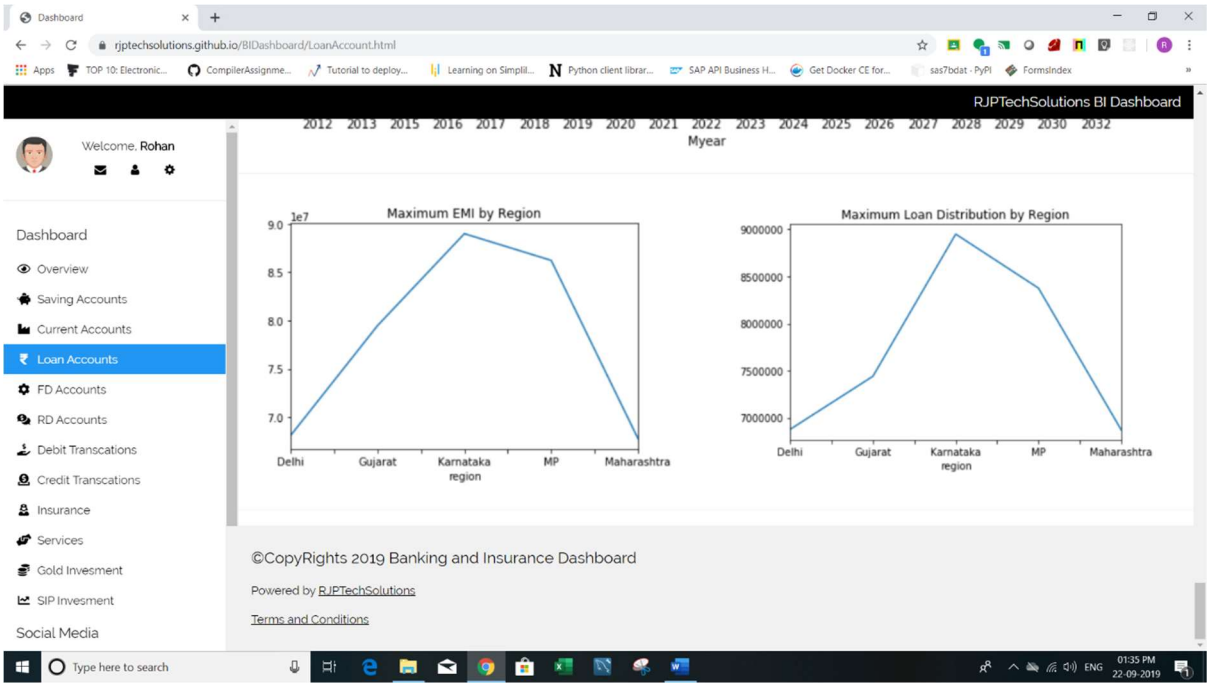
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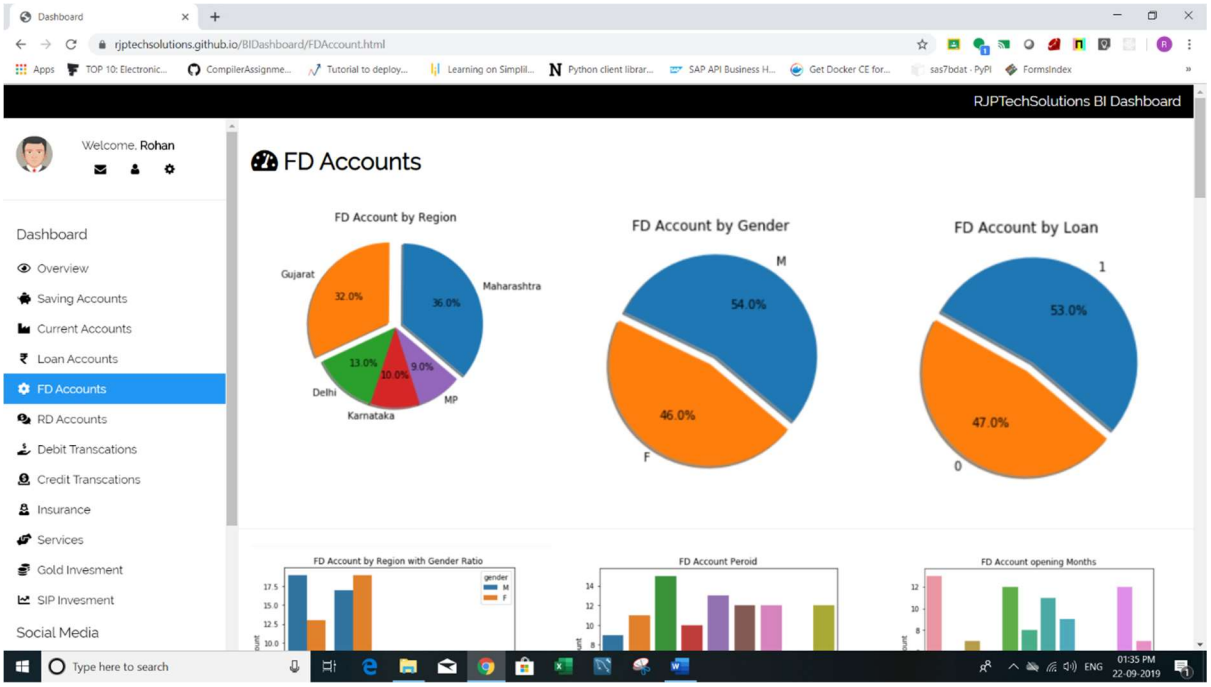
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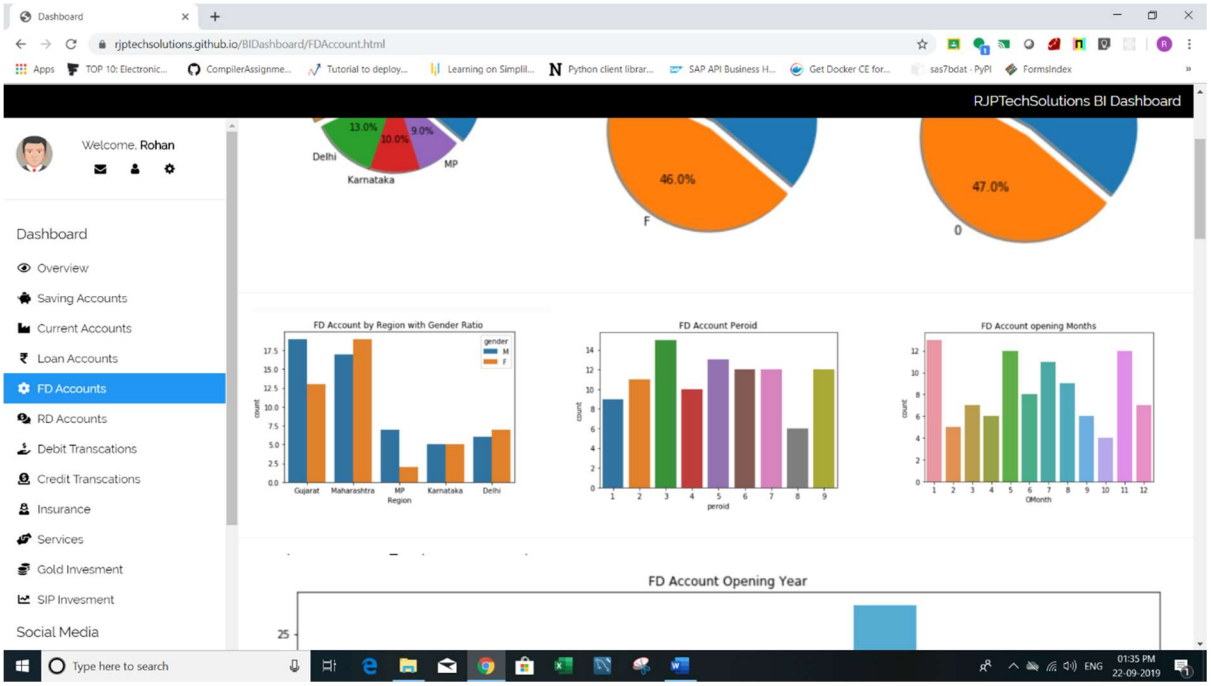
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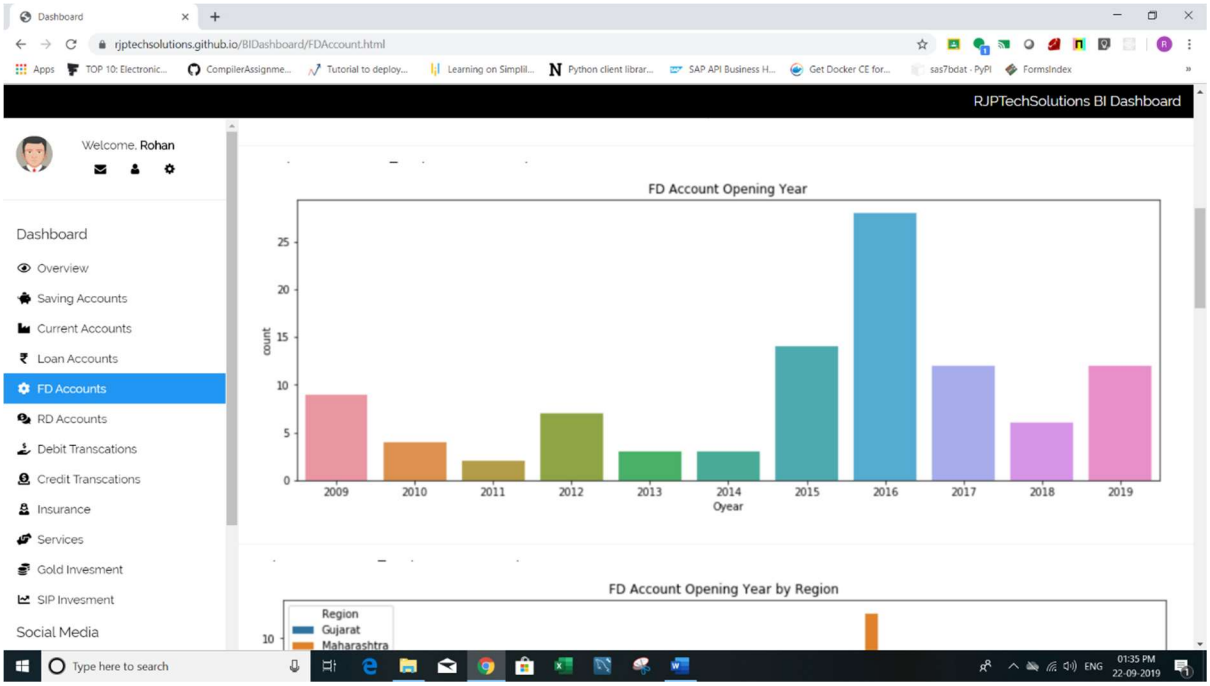
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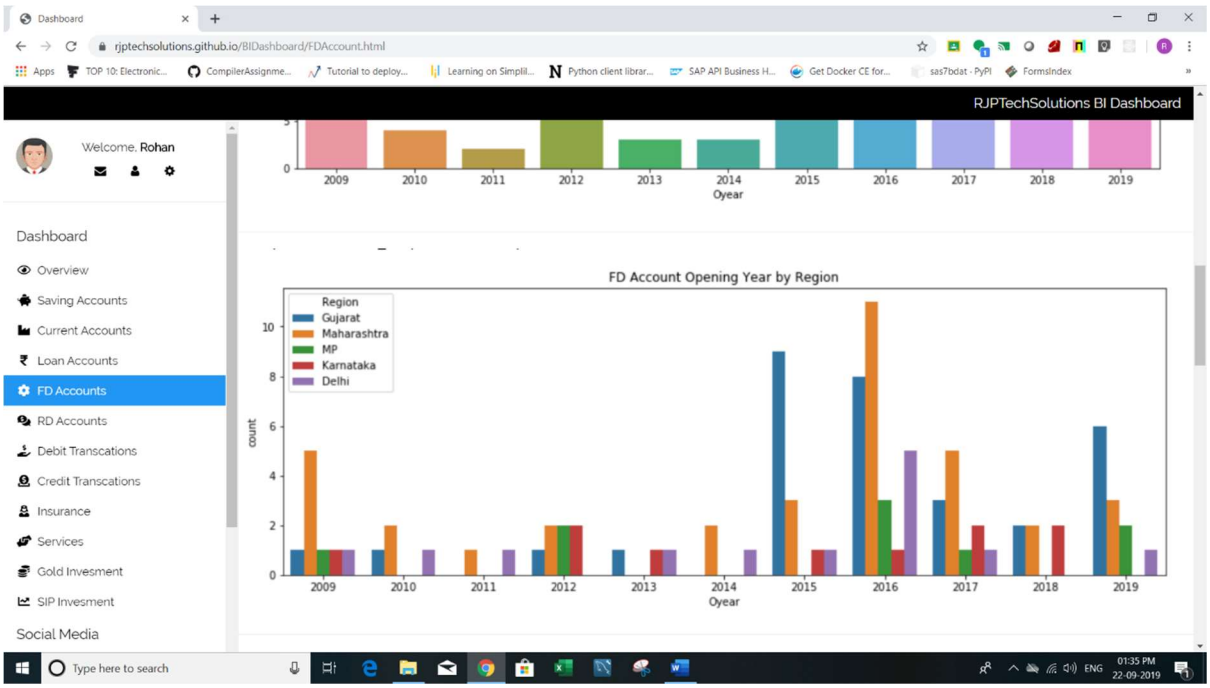
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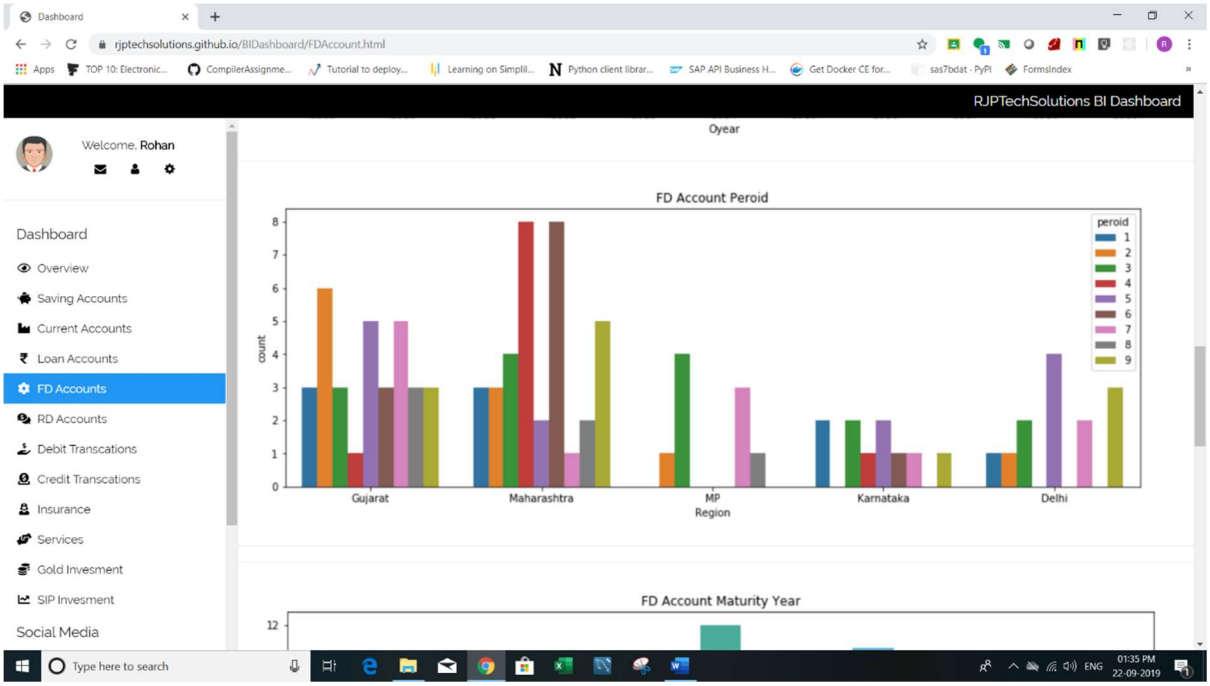
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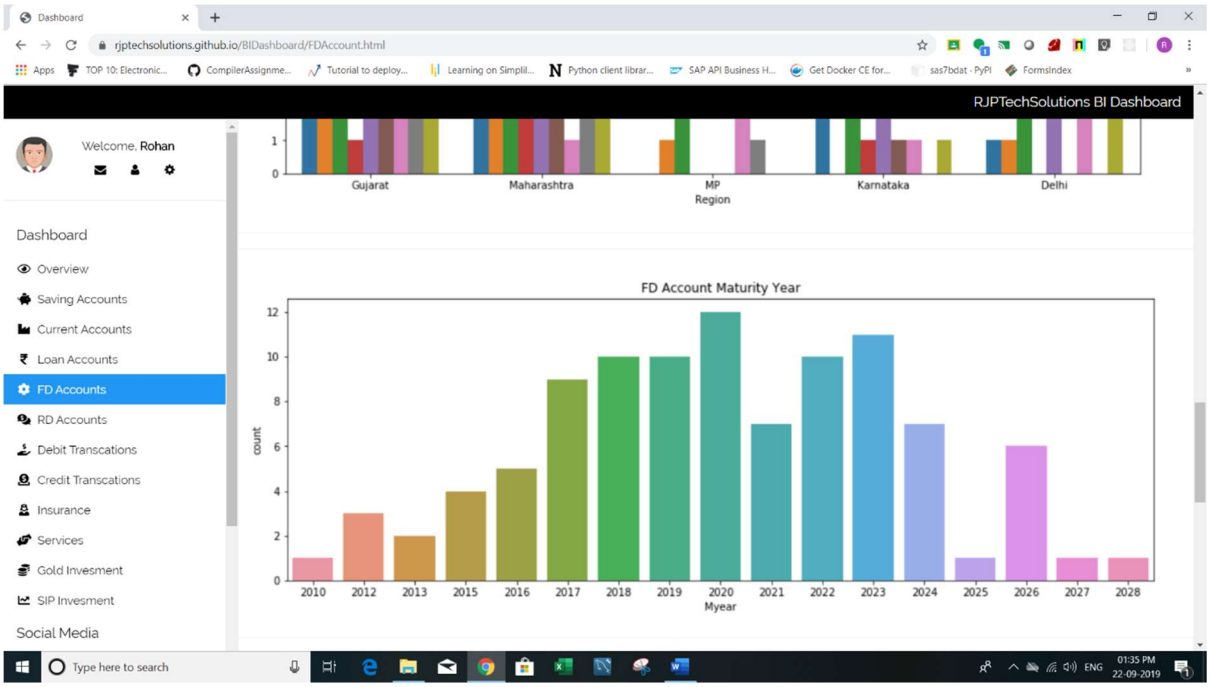
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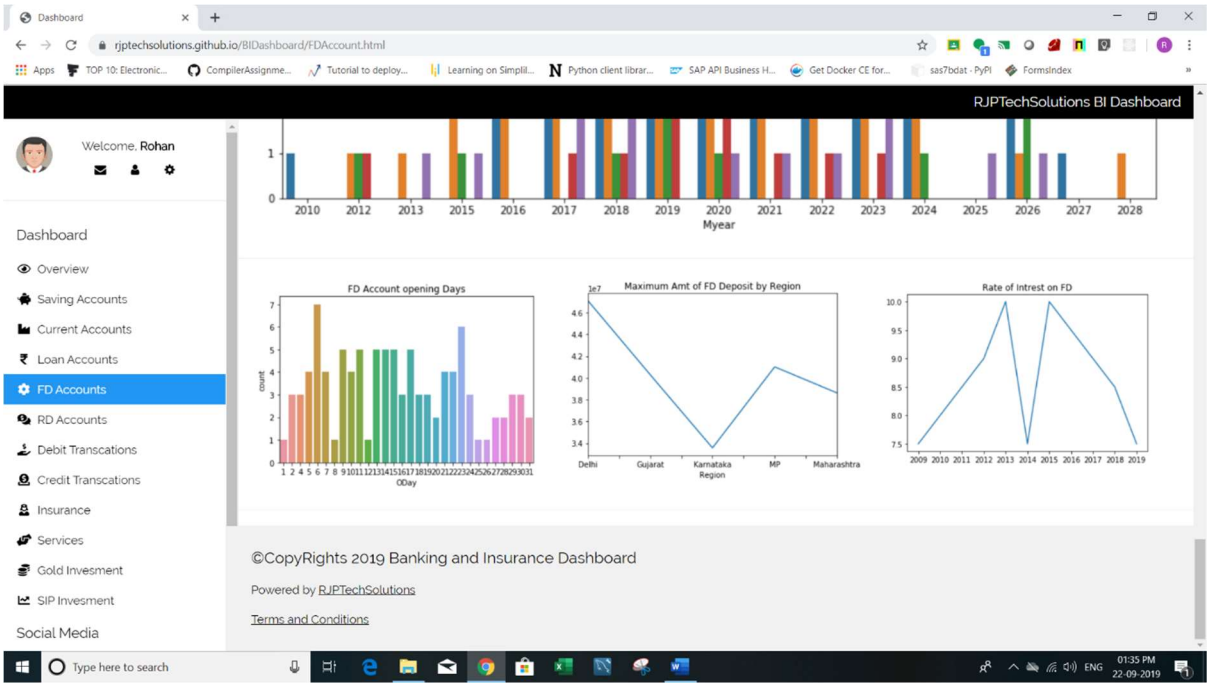
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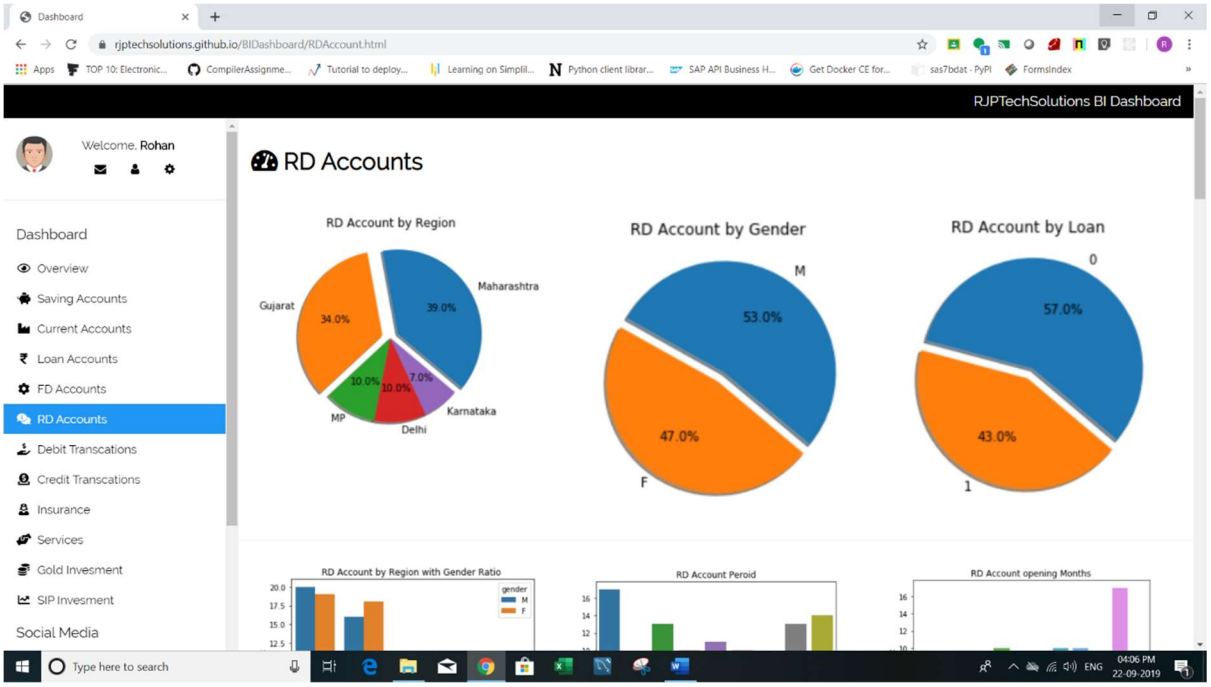
RD Accounts: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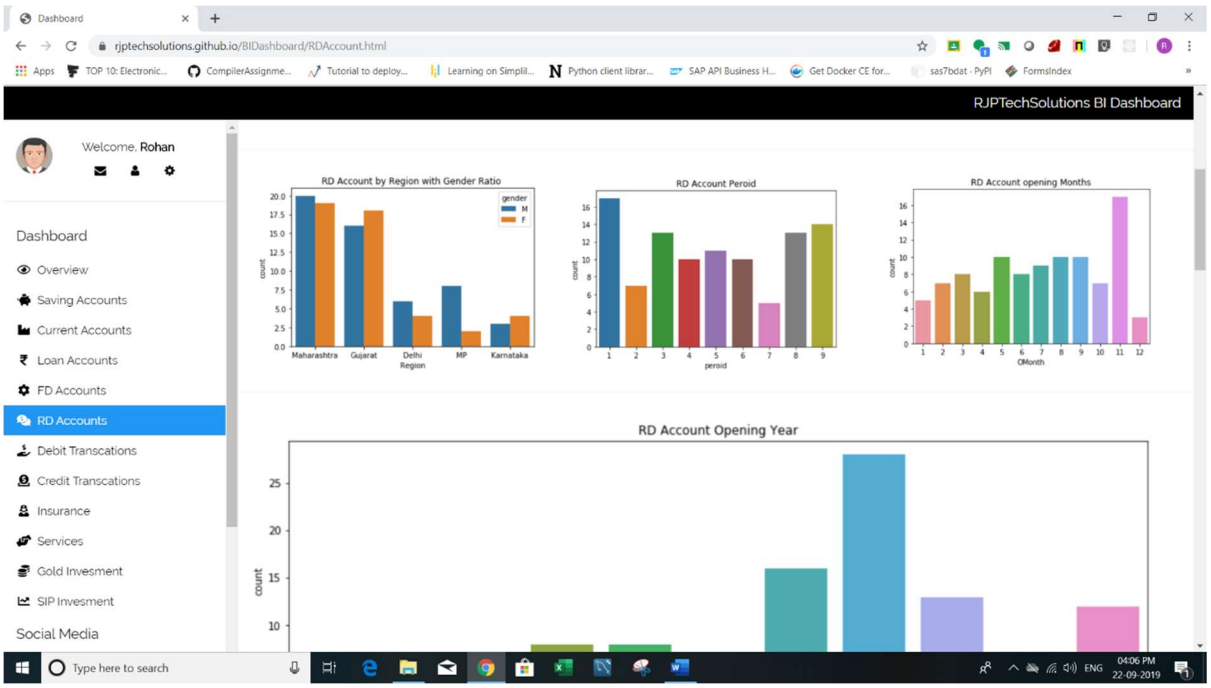
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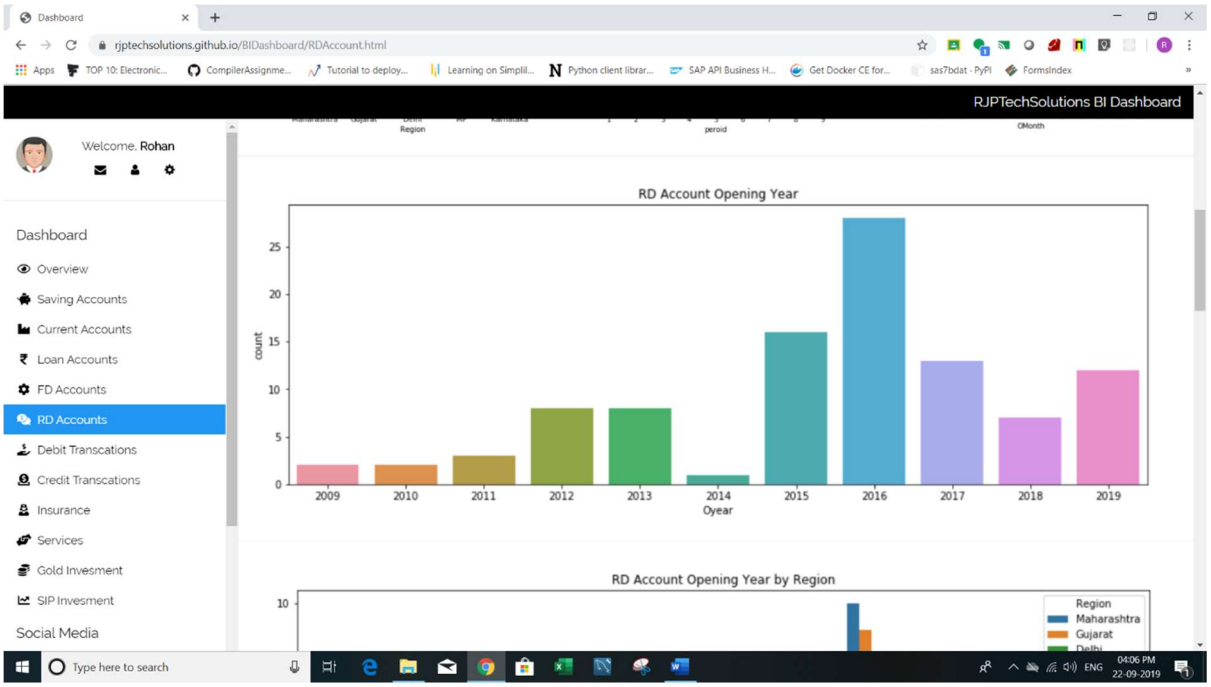
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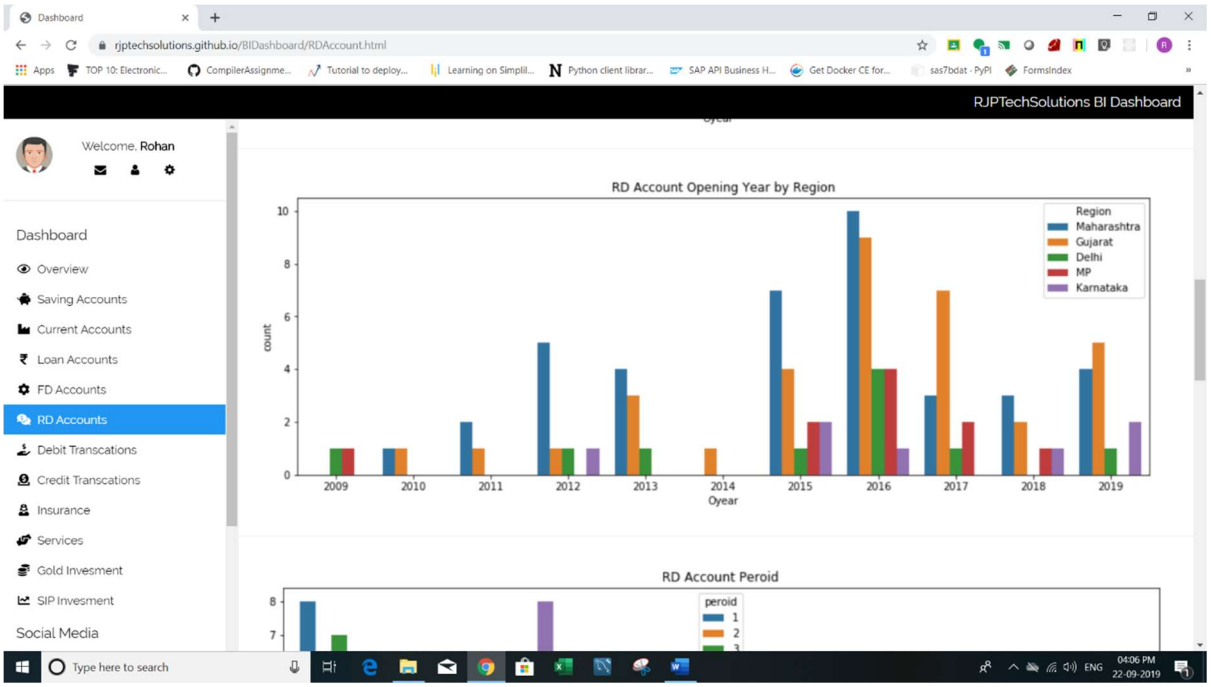
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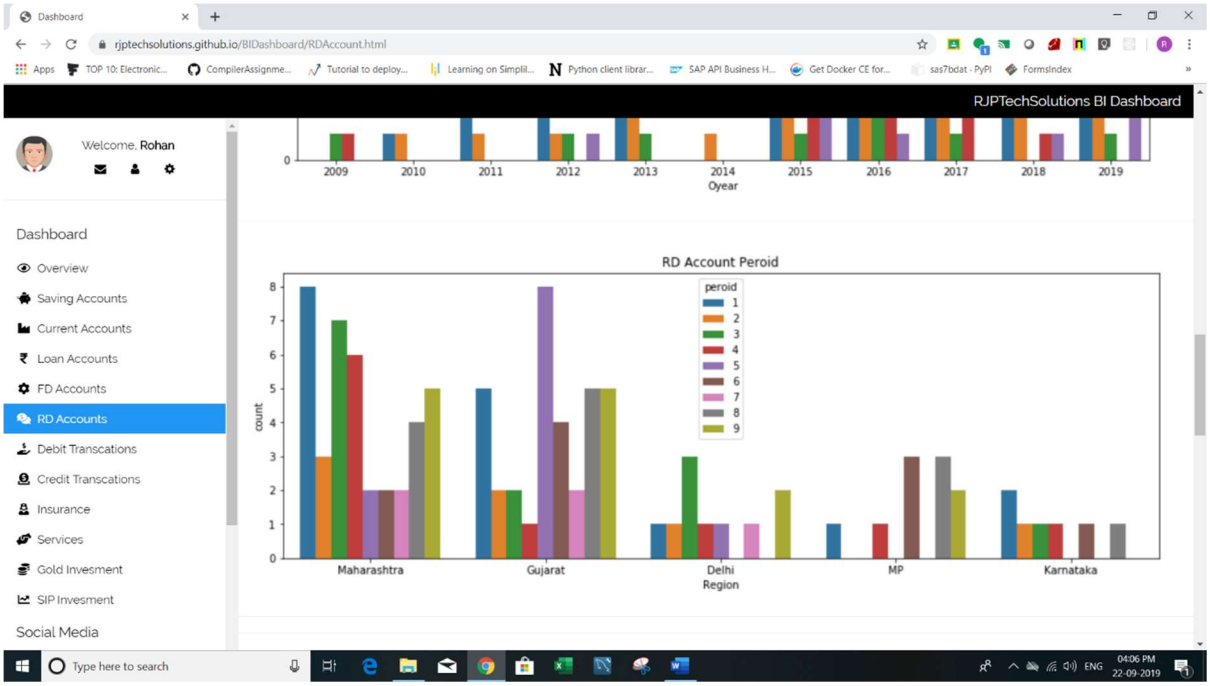
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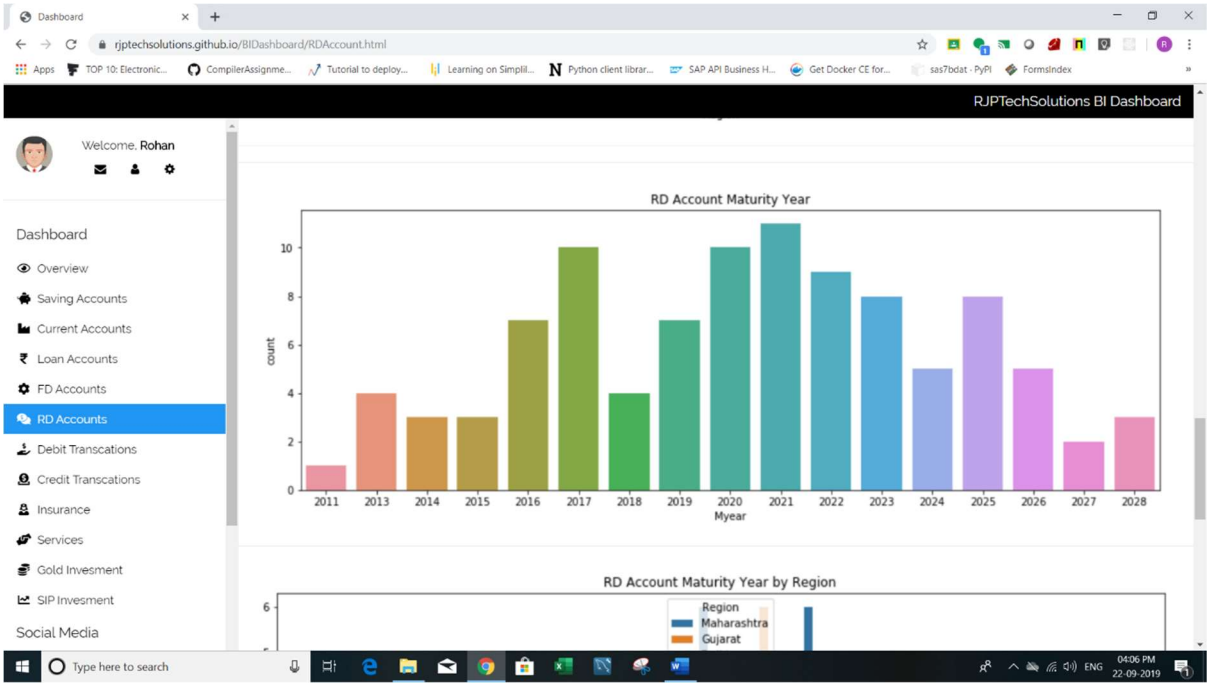
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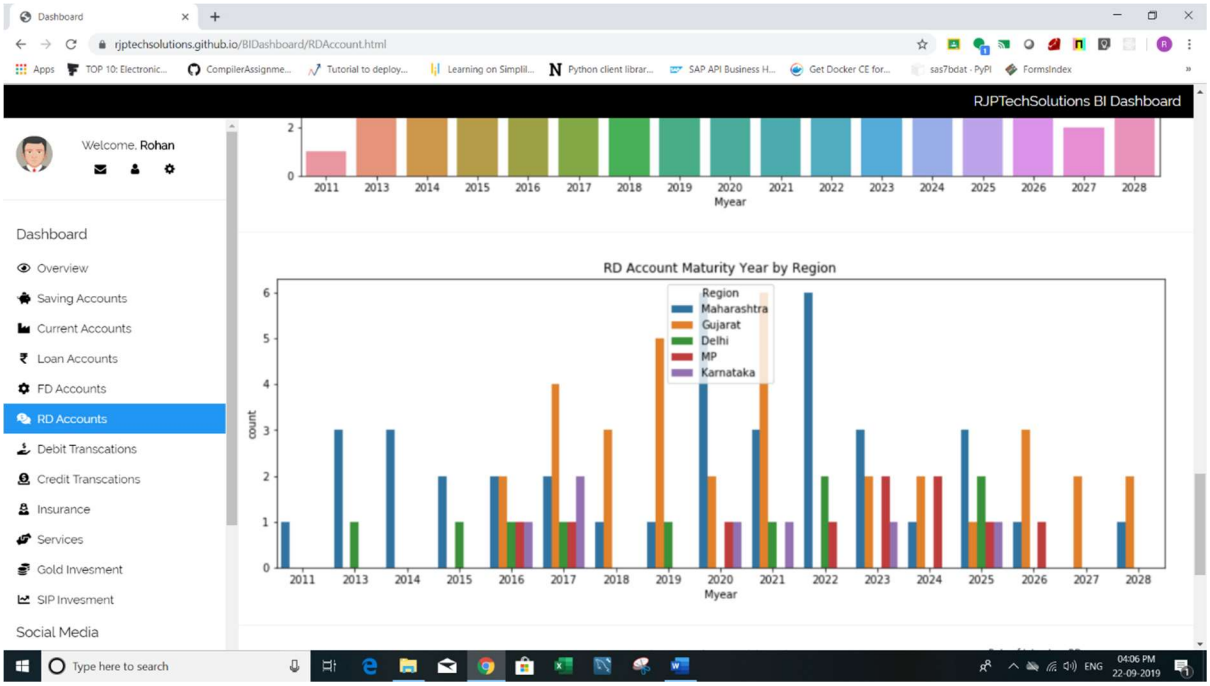
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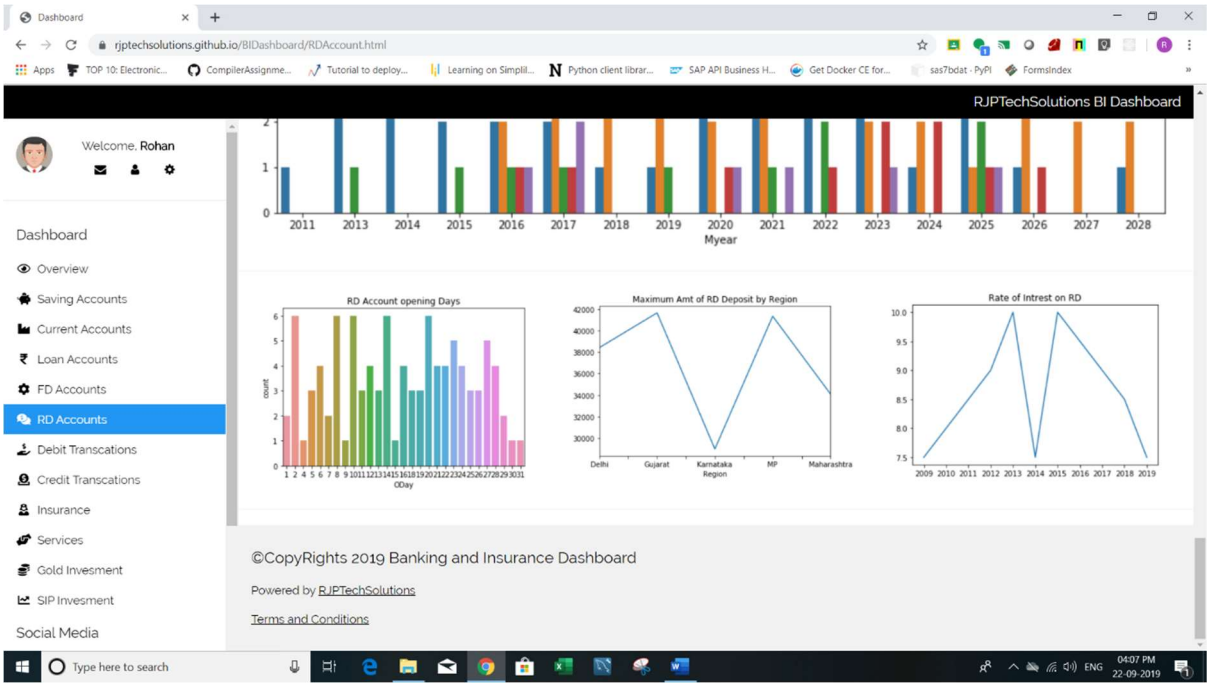
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Rate of Intrest on RD
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Gujarat
Karnataka
MP
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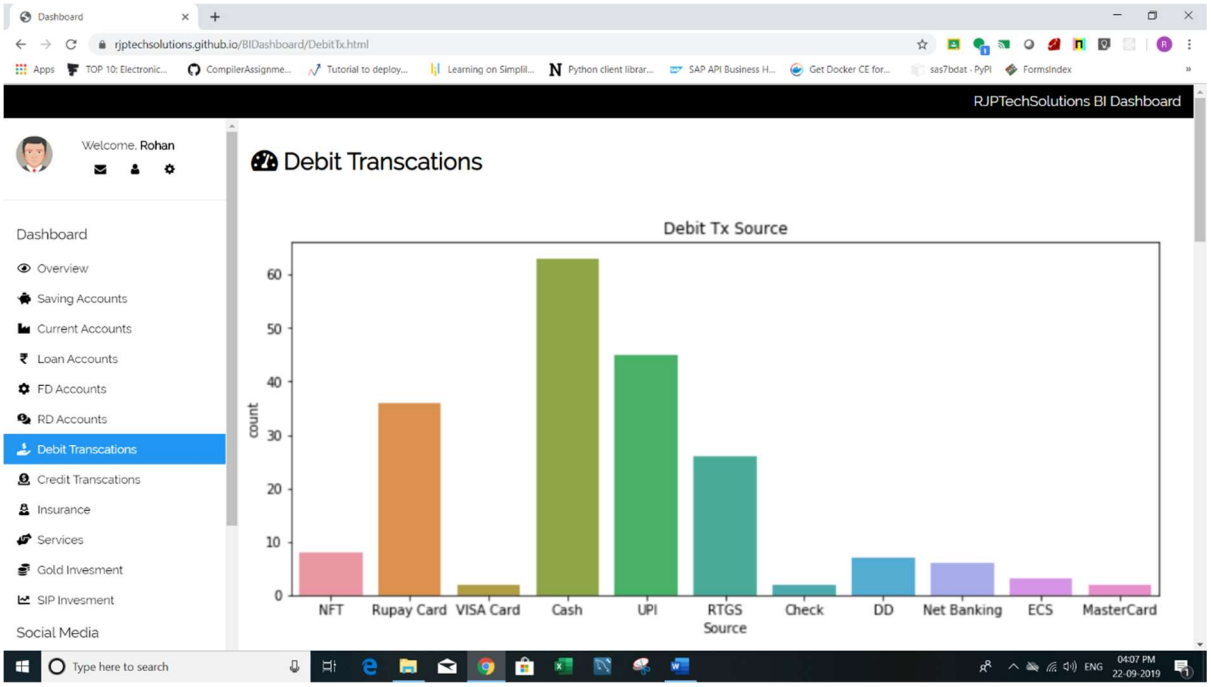
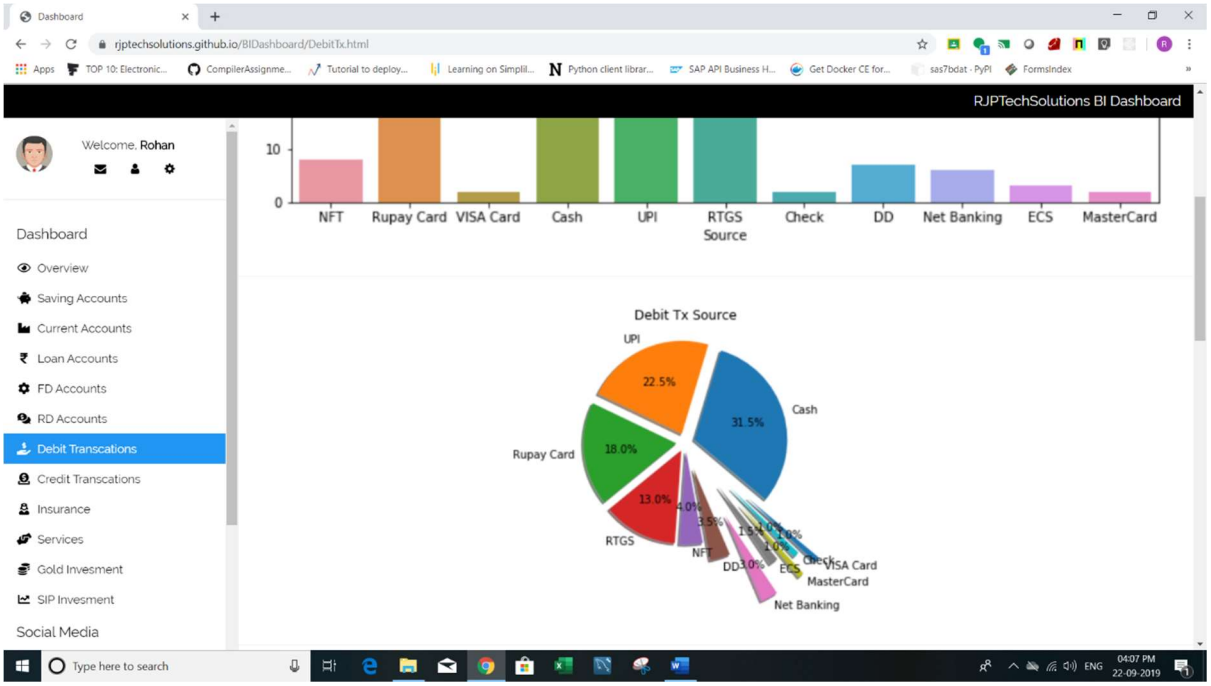
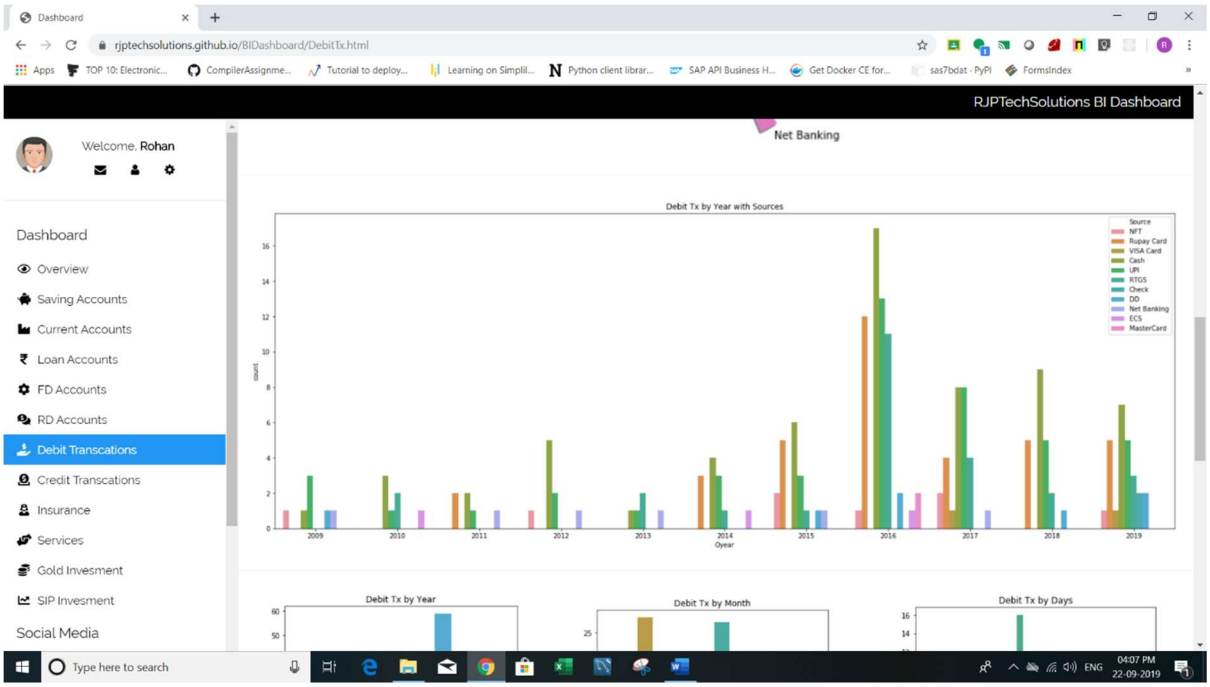
Debit Transactions:



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Debit Tx by Year
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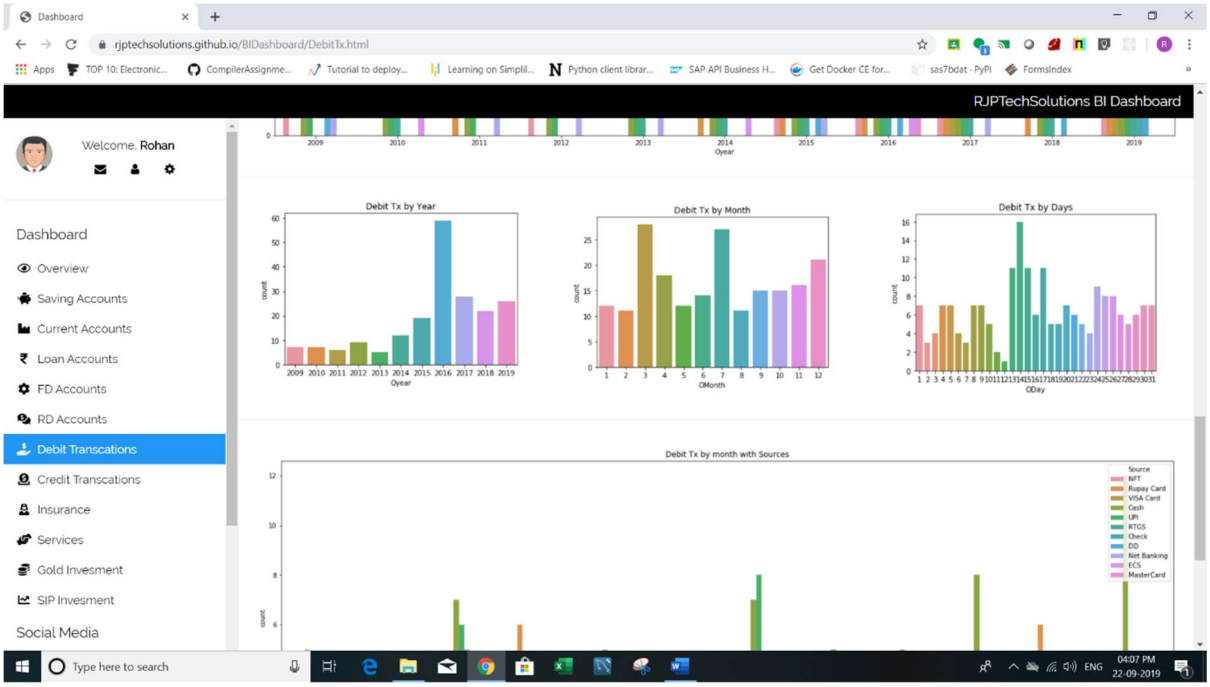
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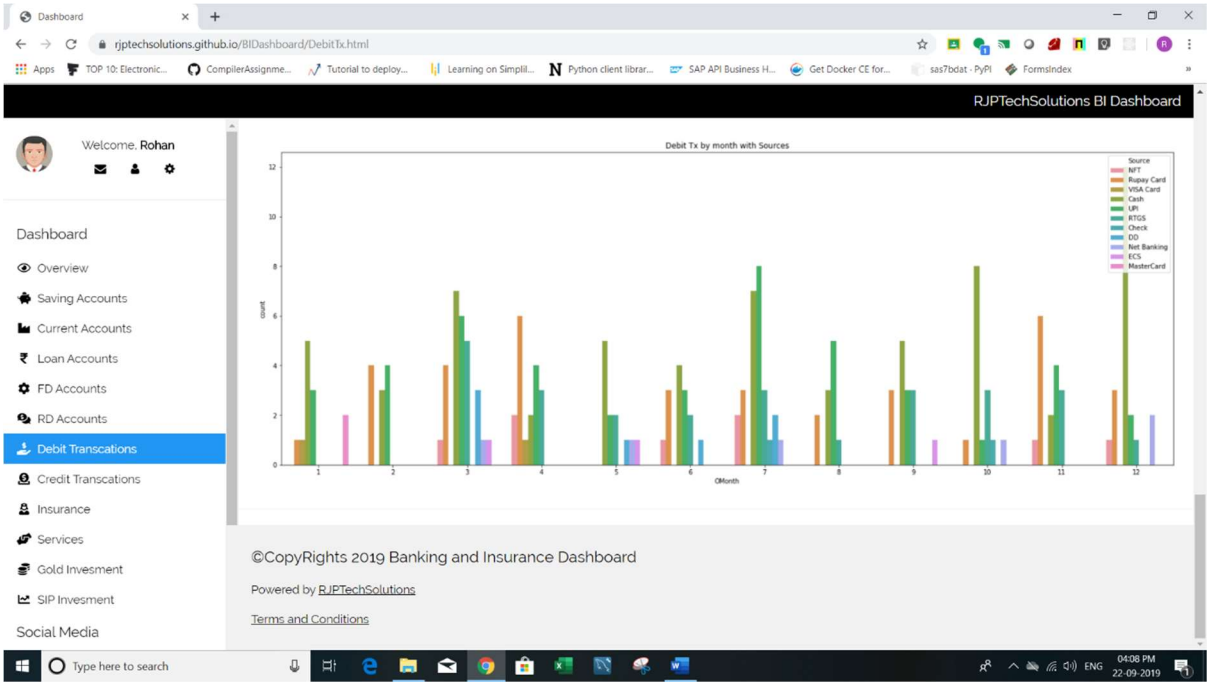
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Rupay Card
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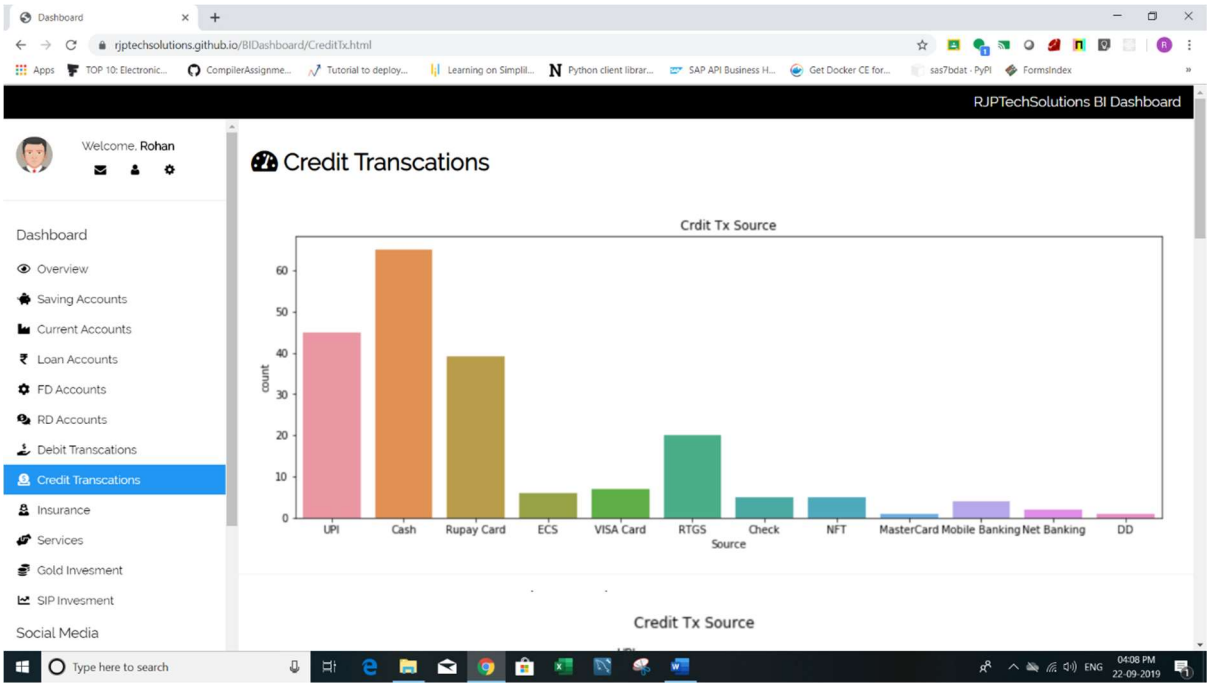
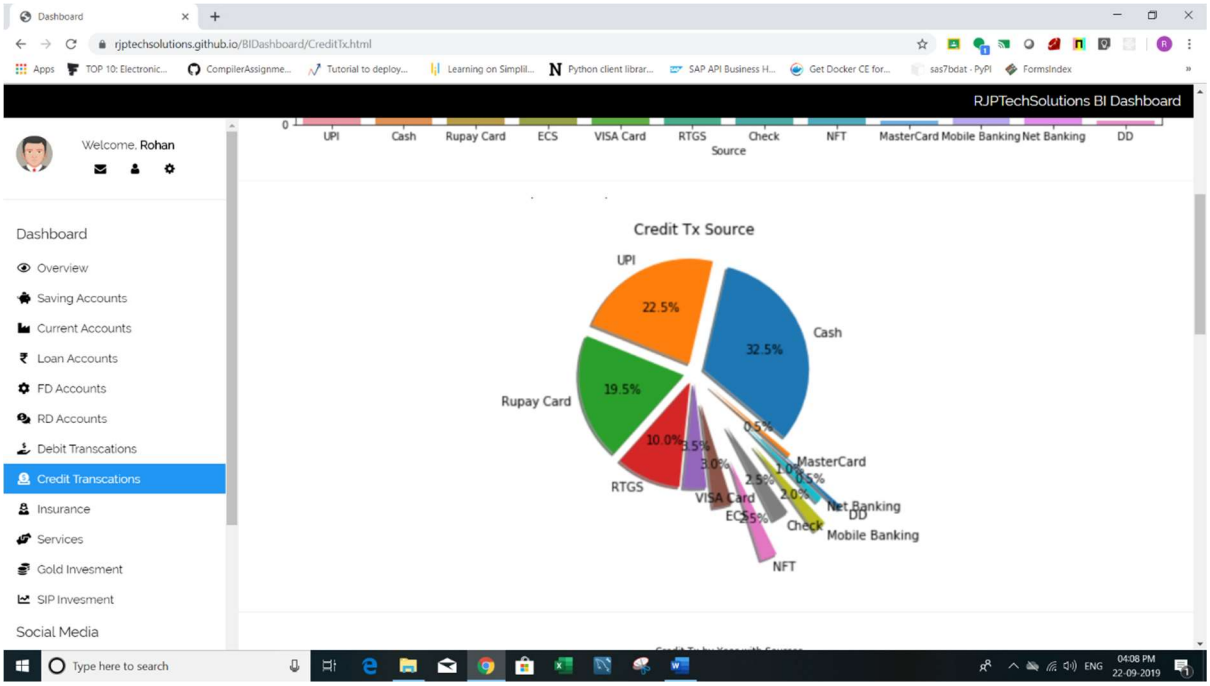
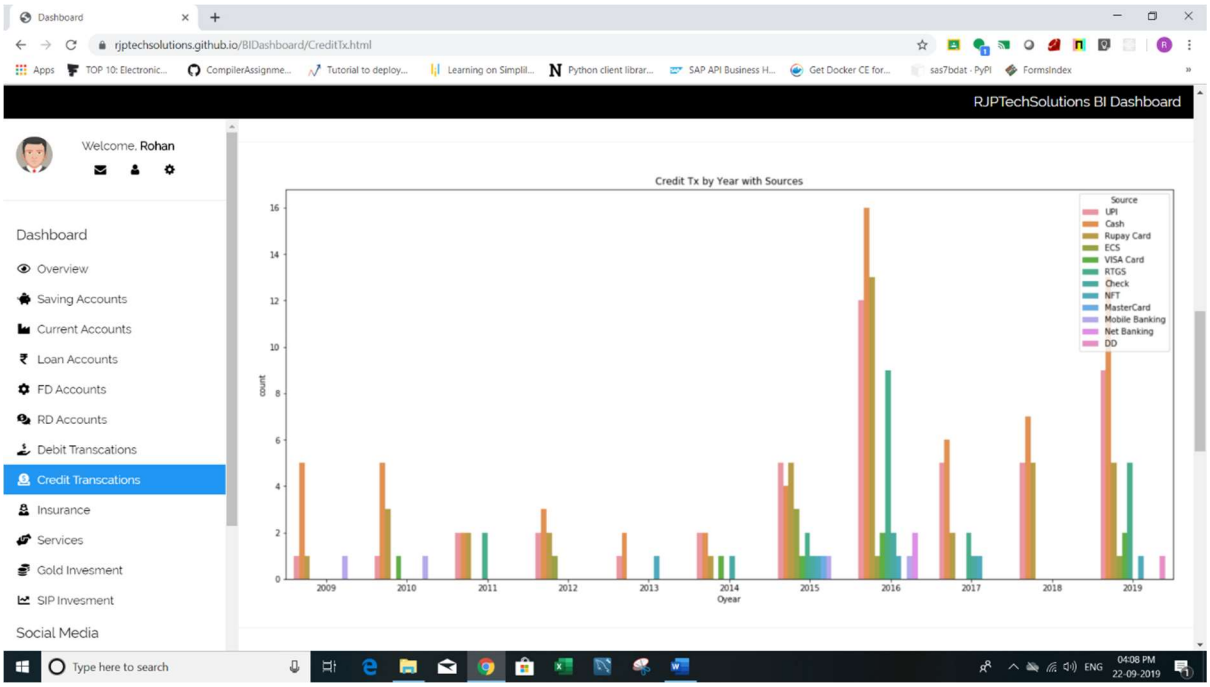
Credit Transactions:



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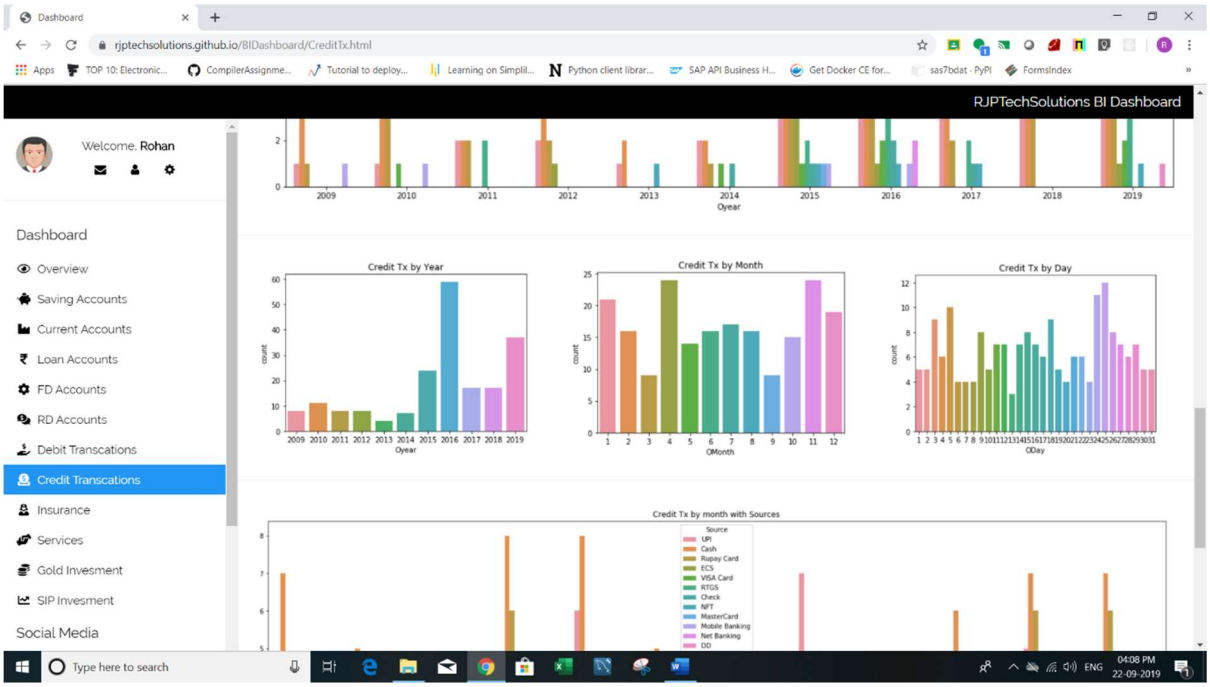
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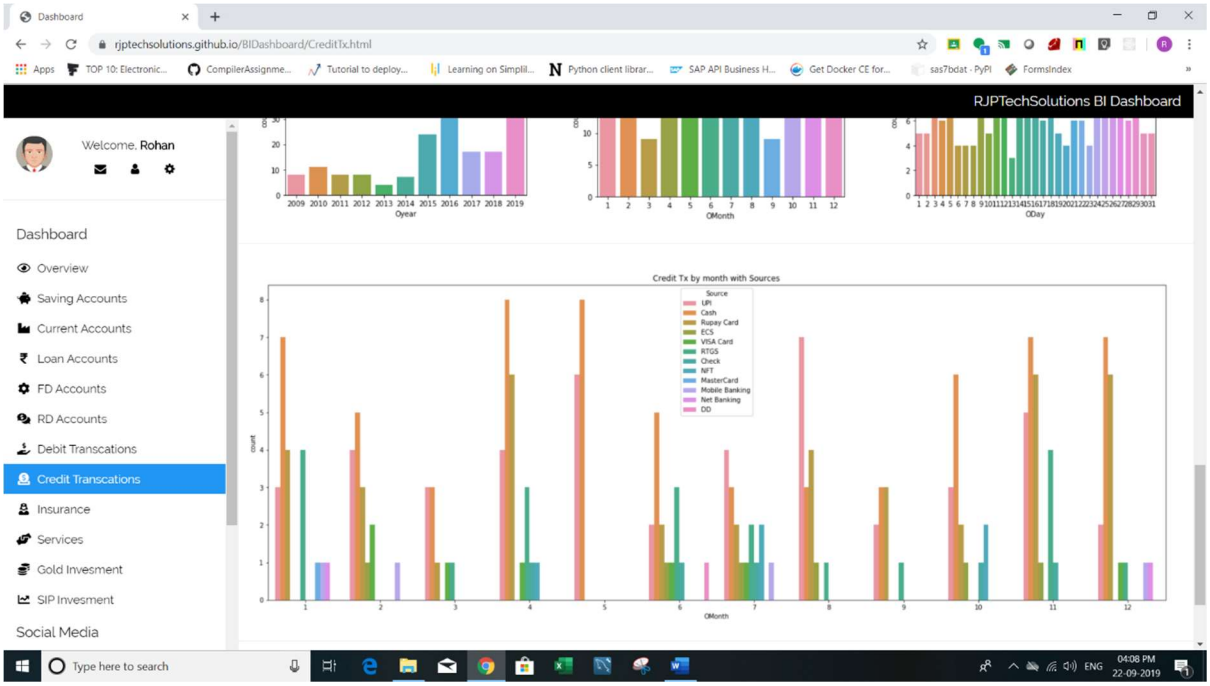
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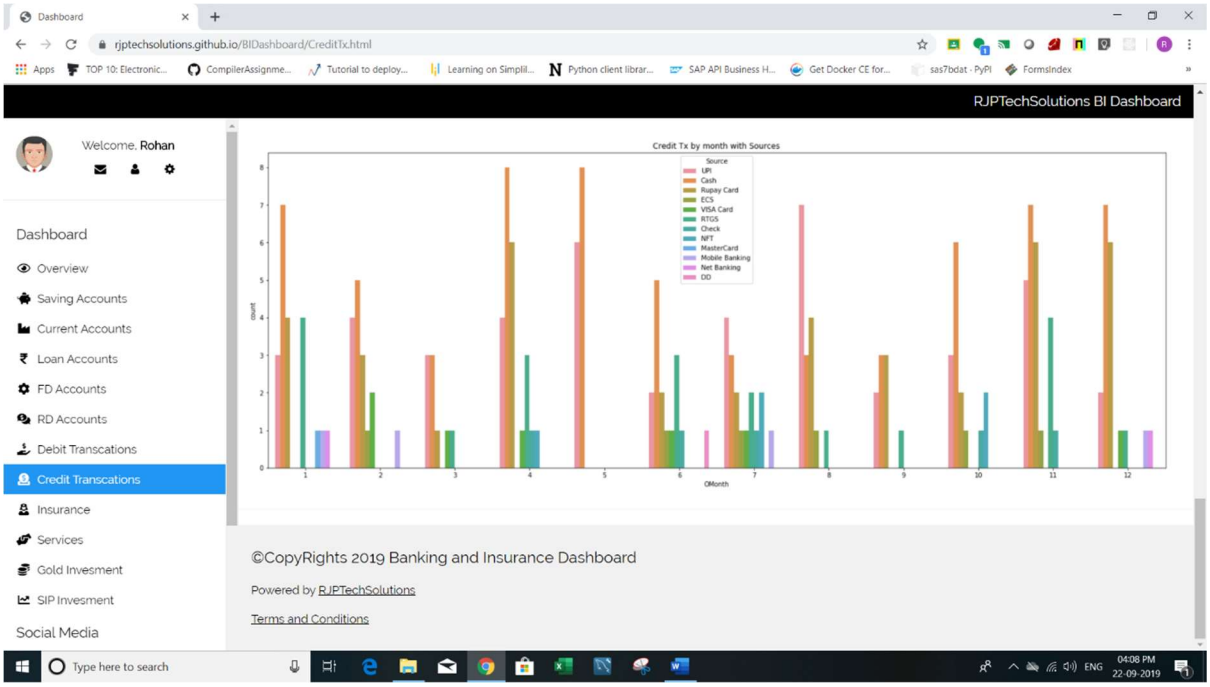
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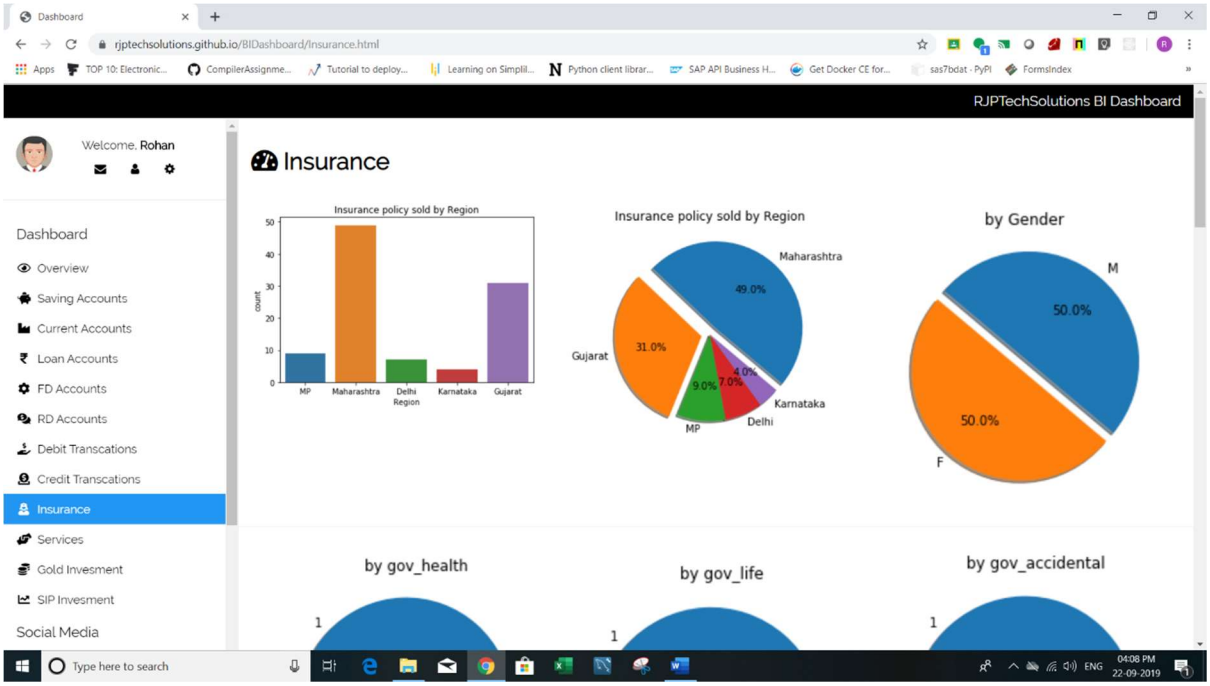
Insurance: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MP
Maharashtra
Delhi
Karnataka
Gujarat
Region
count
Insurance policy sold by Region
Maharashtra
49.0%
Gujarat
31.0%
9.0%
7.0%
4.0%
Karnataka
Delhi
MP
by Gender
M
50.0%
50.0%
F
by gov_health
by gov_life
by gov_accidental
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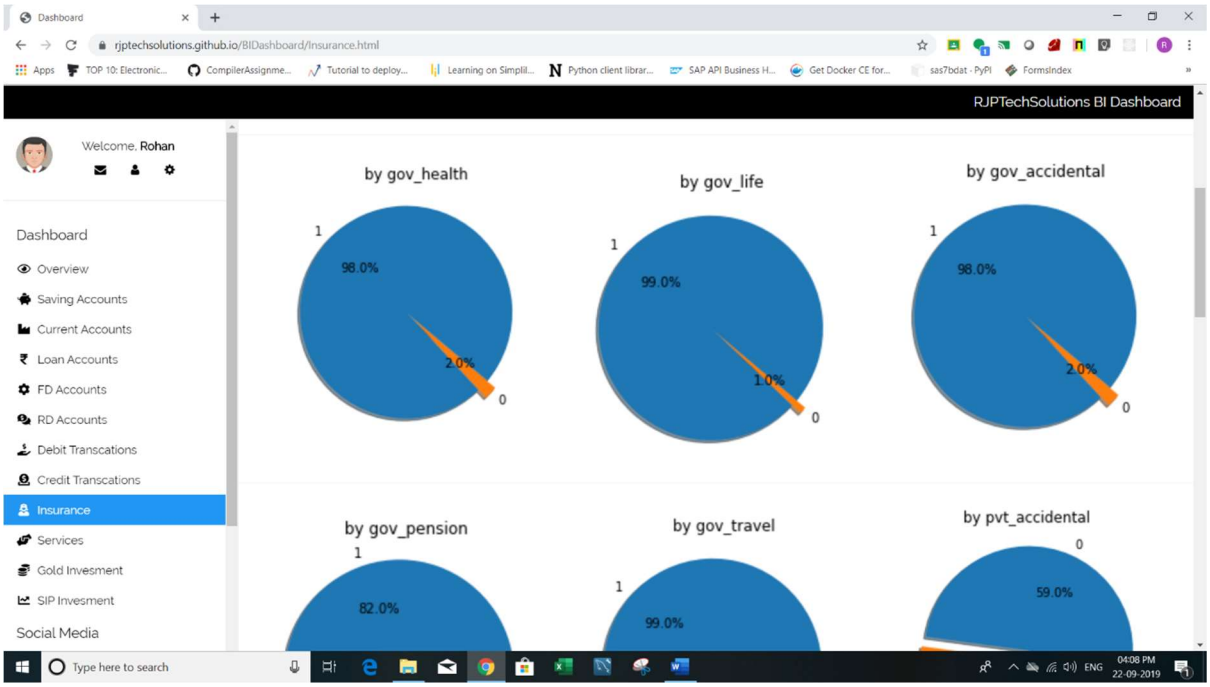
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by gov_health
1
98.0%
2.0%
0
by gov_life
1
99.0%
1.0%
0
by gov_accidental
1
98.0%
2.0%
0
by gov_pension
1
82.0%
by gov_travel
1
99.0%
by pvt_accidental
0
59.0%
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18.0%
by gov_travel
99.0%
1.0%
by pvt_accidental
59.0%
41.0%
by pvt_gold
by pvt_health
by pvt_home
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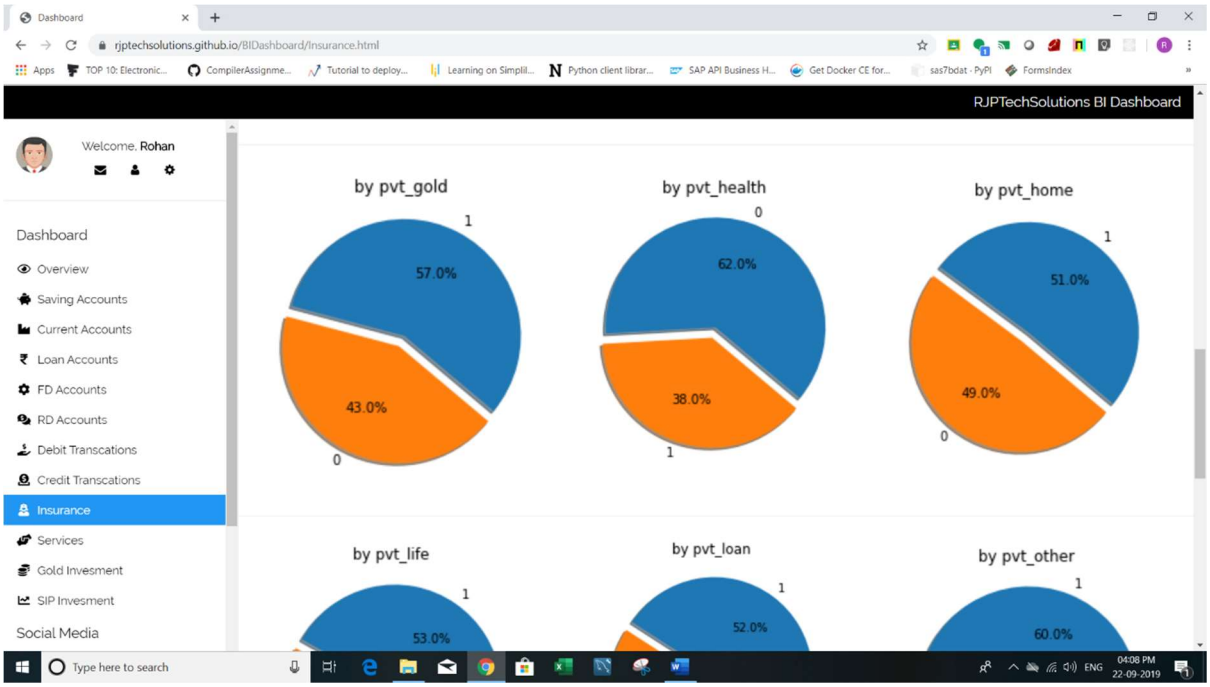
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SIP Invesment
Social Media
by pvt_gold
57.0%
43.0%
by pvt_health
62.0%
38.0%
by pvt_home
51.0%
49.0%
by pvt_life
53.0%
by pvt_loan
52.0%
by pvt_other
60.0%
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Social Media
by pvt_life
53.0%
47.0%
by pvt_loan
52.0%
48.0%
by pvt_other
60.0%
40.0%
by pvt_travel
by pvt_vehical
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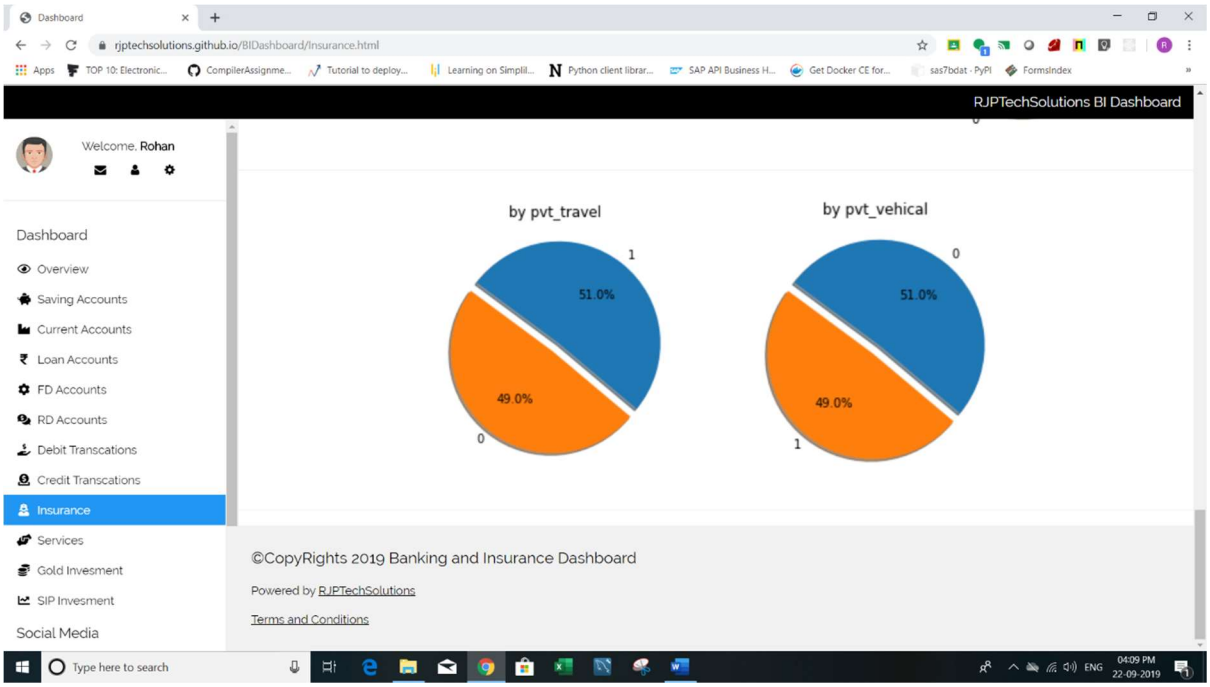
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Social Media
by pvt_travel
51.0%
49.0%
by pvt_vehical
51.0%
49.0%
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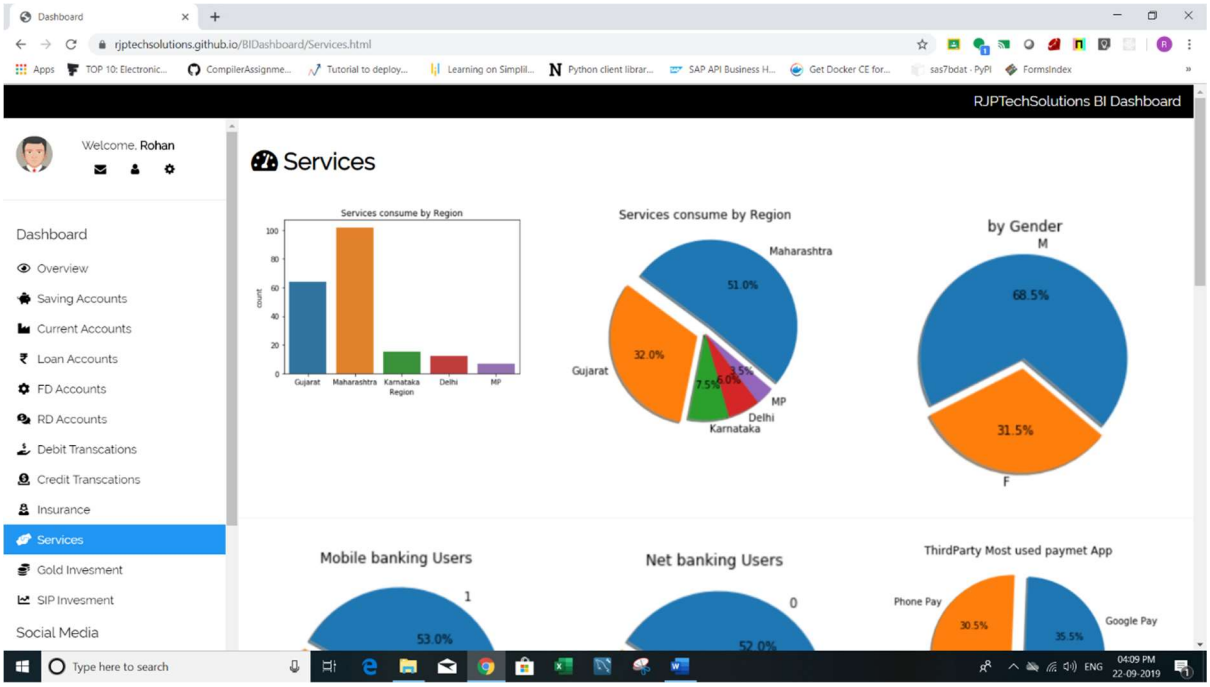
Services: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Services consume by Region
Gujarat
Maharashtra
Karnataka
Delhi
MP
Region
count
Services consume by Region
Maharashtra
51.0%
Gujarat
32.0%
MP
Delhi
Karnataka
by Gender
M
68.5%
31.5%
F
Mobile banking Users
53.0%
47.0%
Net banking Users
52.0%
48.0%
ThirdParty Most used paymet App
Phone Pay
30.5%
Google Pay
35.5%
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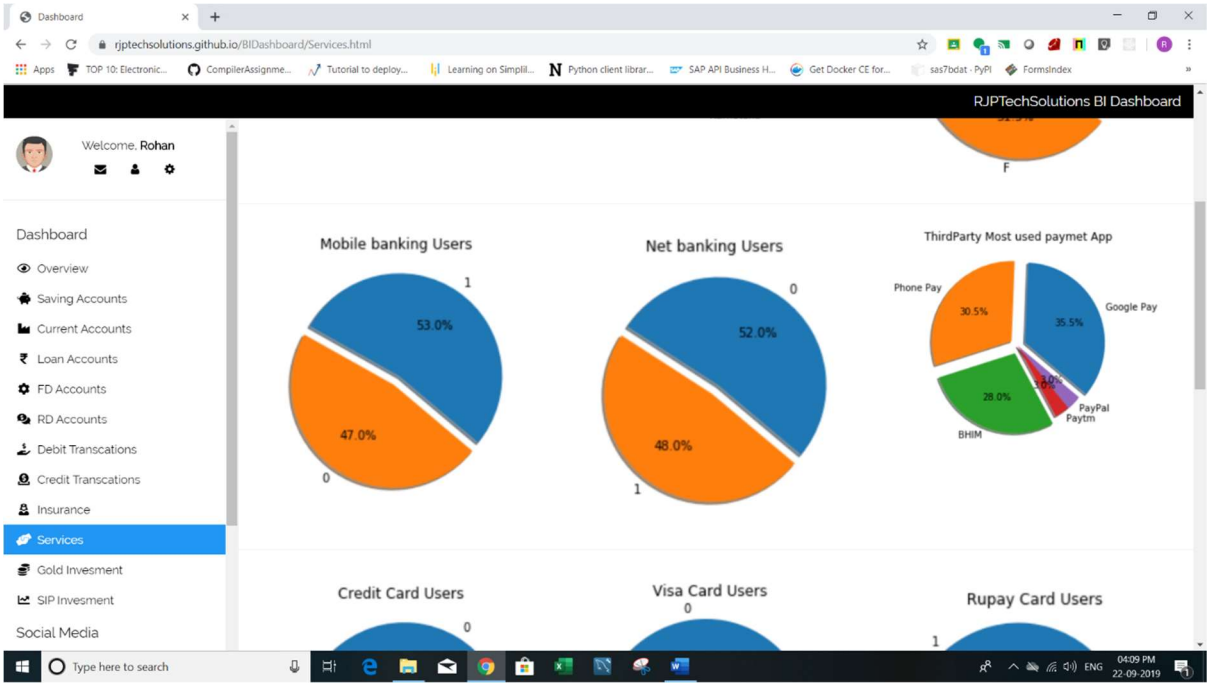
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Social Media
Mobile banking Users
53.0%
47.0%
Net banking Users
52.0%
48.0%
ThirdParty Most used paymet App
Phone Pay
30.5%
Google Pay
35.5%
28.0%
PayPal
Paytm
BHIM
Credit Card Users
Visa Card Users
Rupay Card Users
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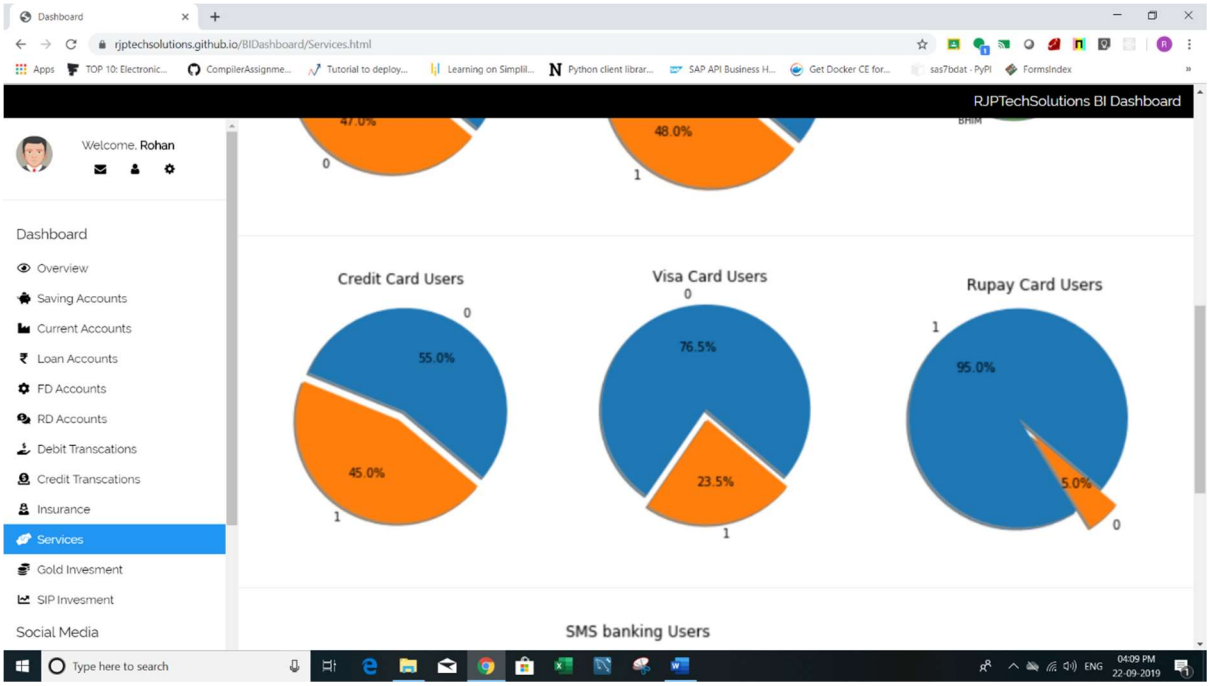
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Insurance
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Gold Invesment
SIP Invesment
Social Media
48.0%
Credit Card Users
55.0%
45.0%
Visa Card Users
76.5%
23.5%
Rupay Card Users
95.0%
SMS banking Users
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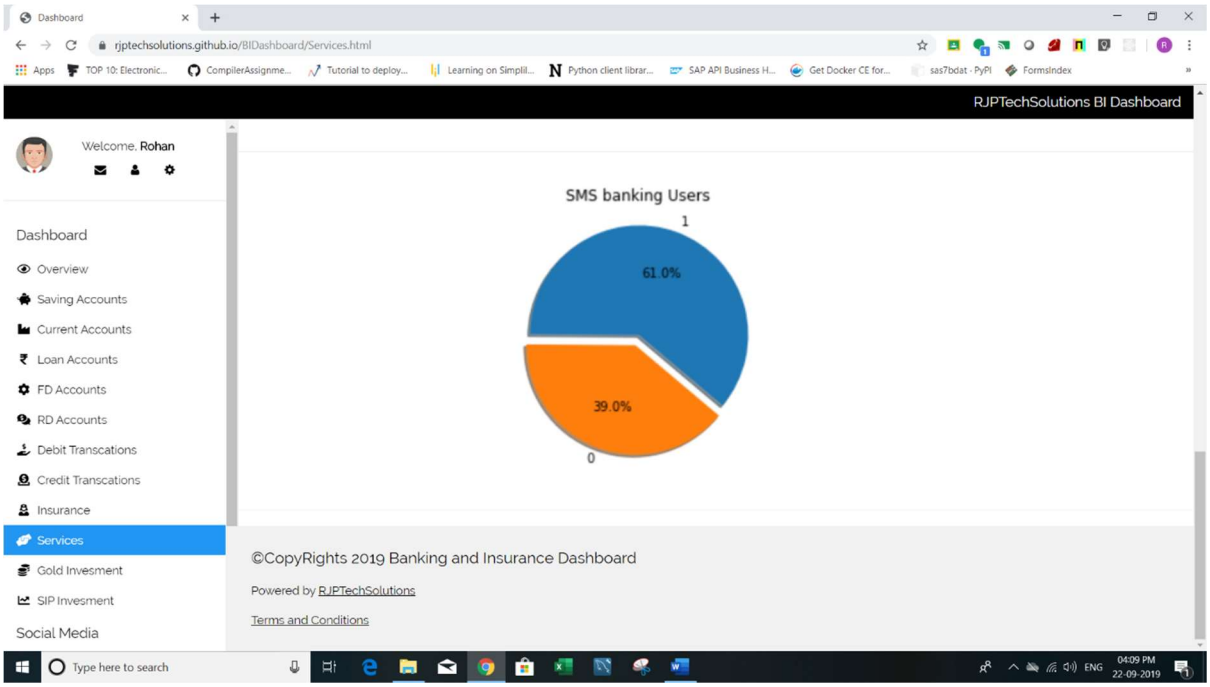
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Insurance
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Gold Invesment
SIP Invesment
Social Media
SMS banking Users
61.0%
39.0%
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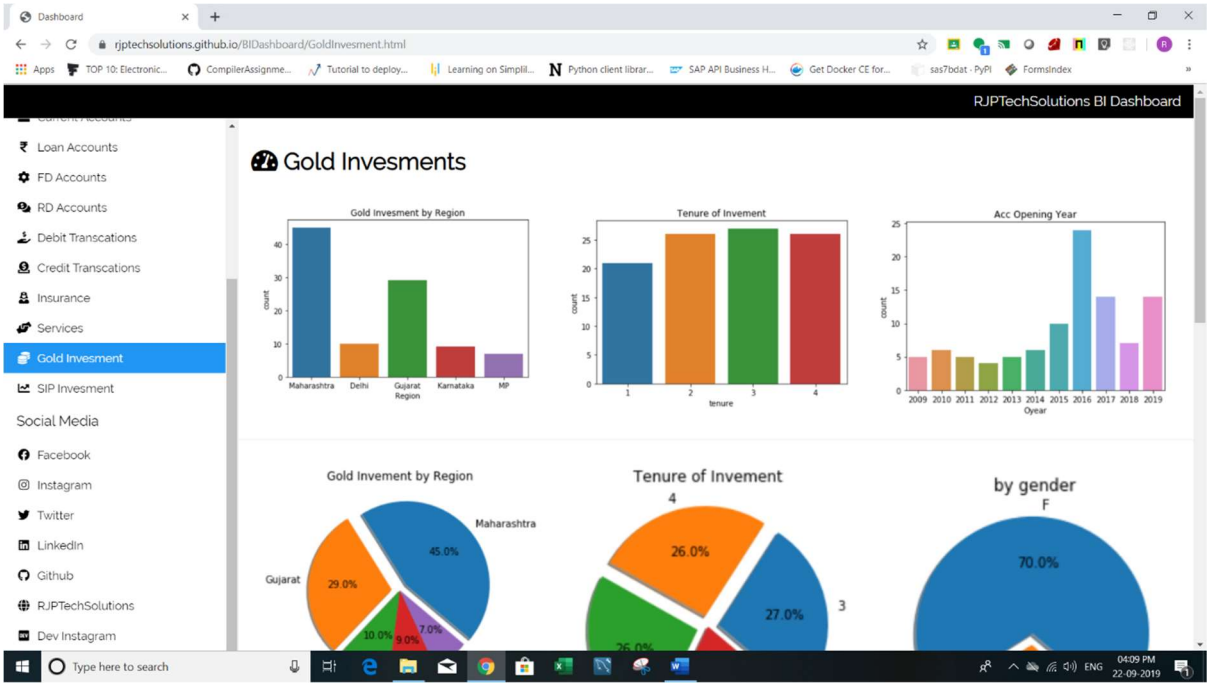
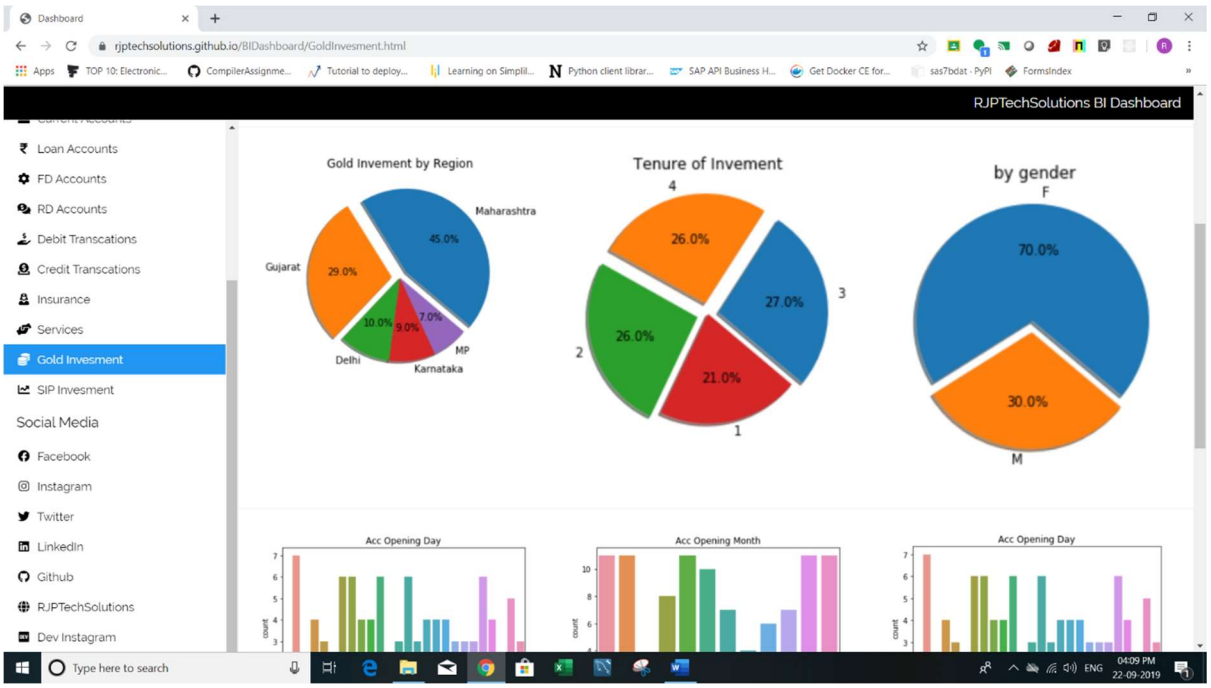
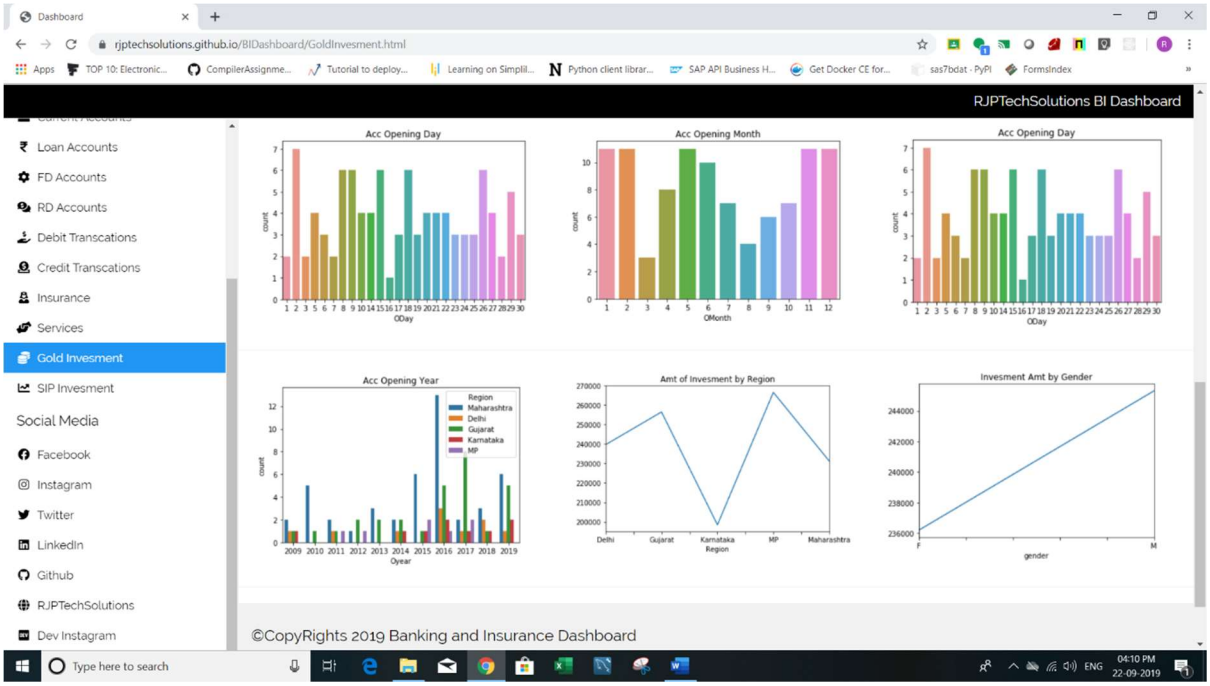
Gold Investments:






Dashboard
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FD Accounts
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Credit Transcations
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Acc Opening Day
Acc Opening Month
Acc Opening Day
Acc Opening Year
Amt of Invesment by Region
Invesment Amt by Gender
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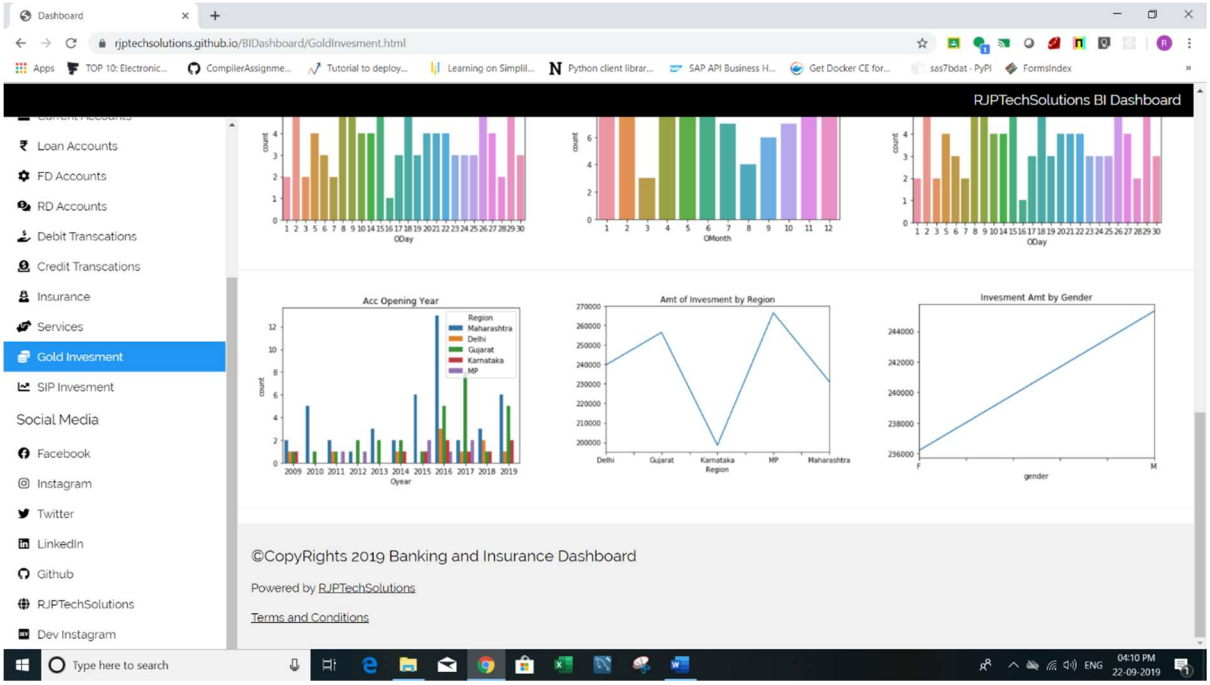
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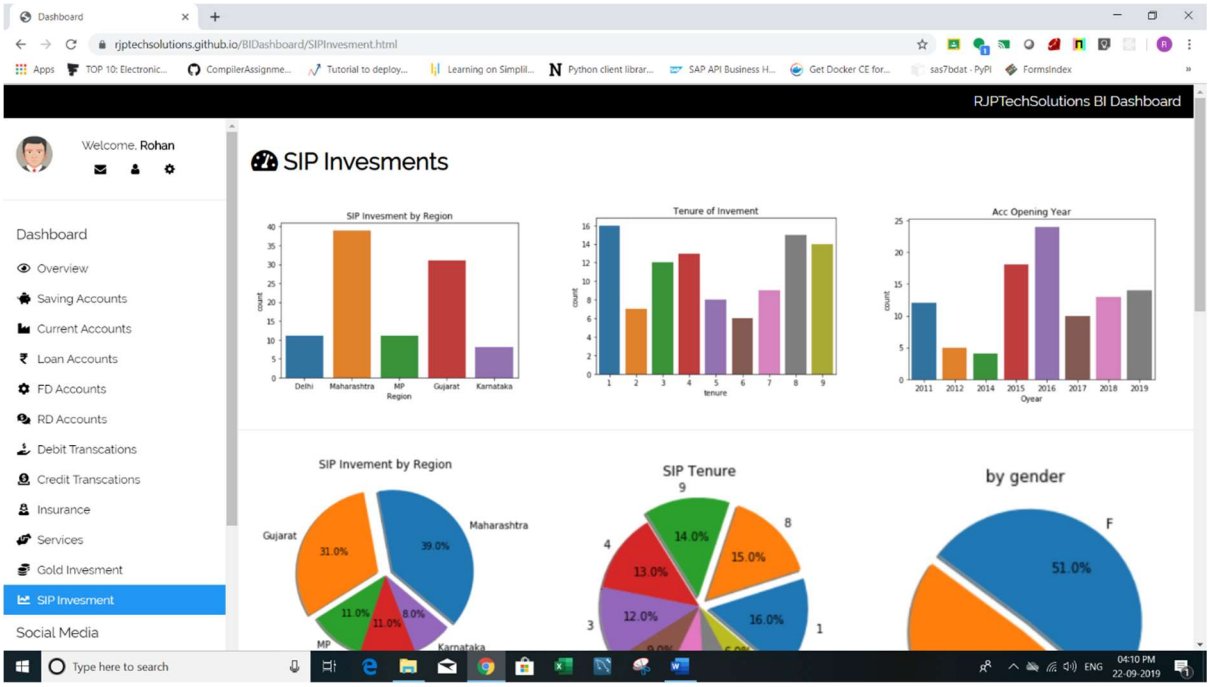

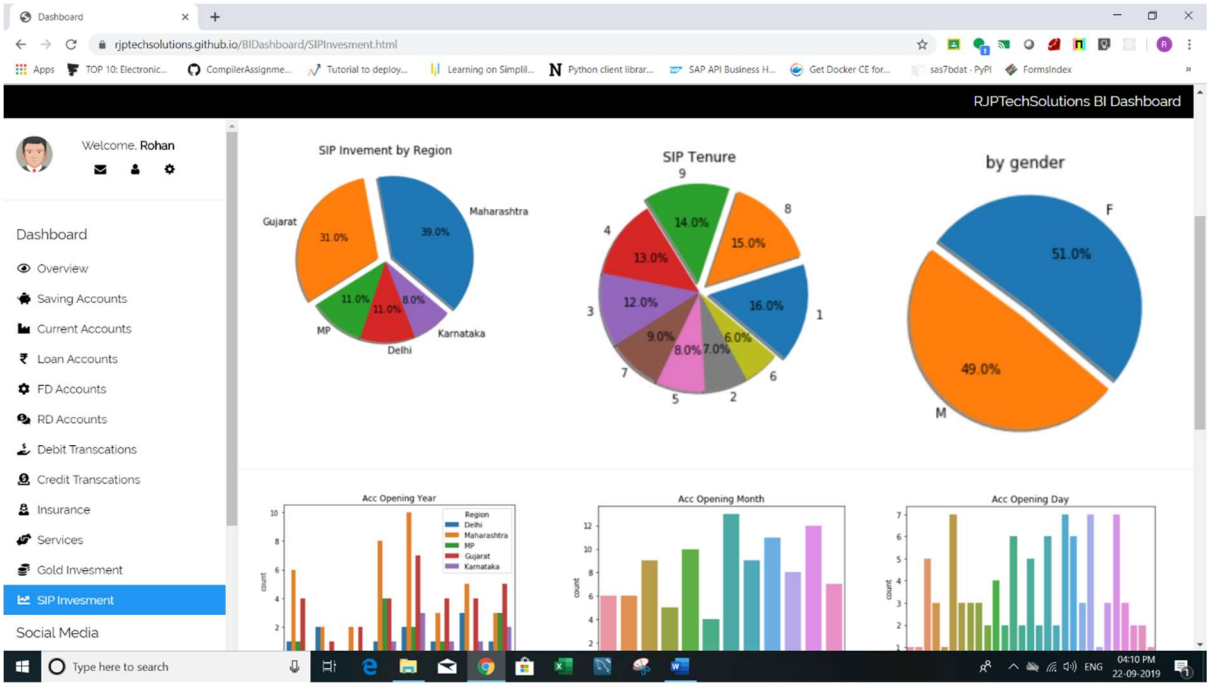

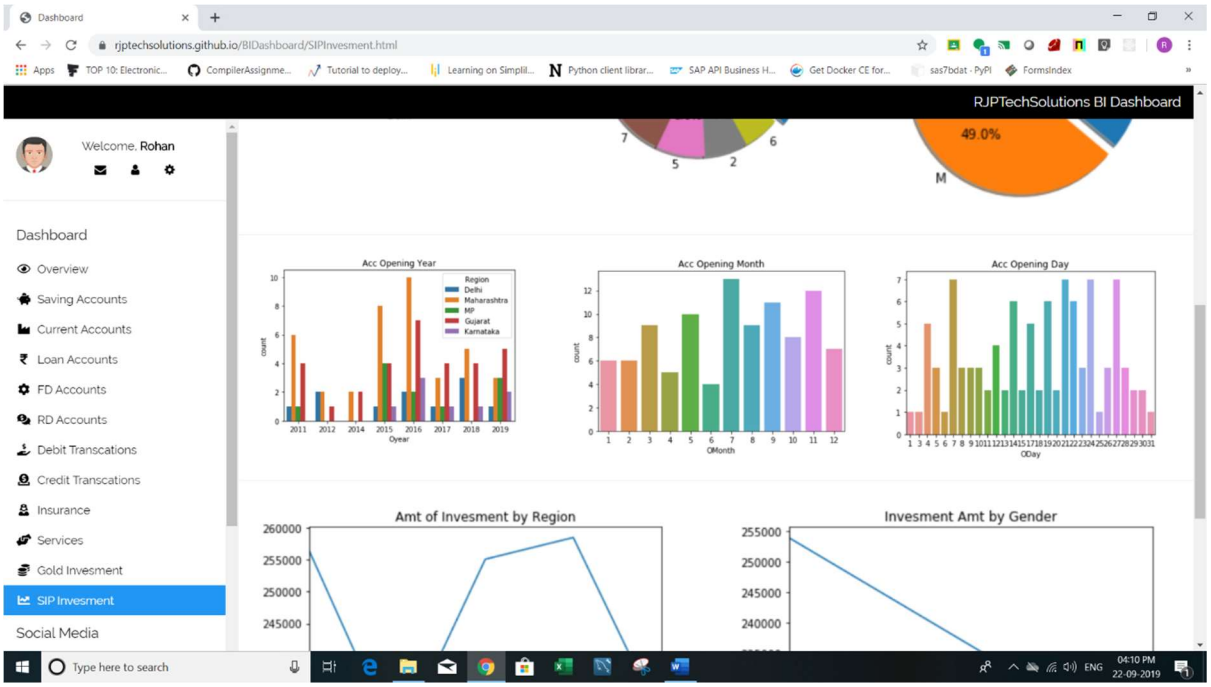
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Current Accounts
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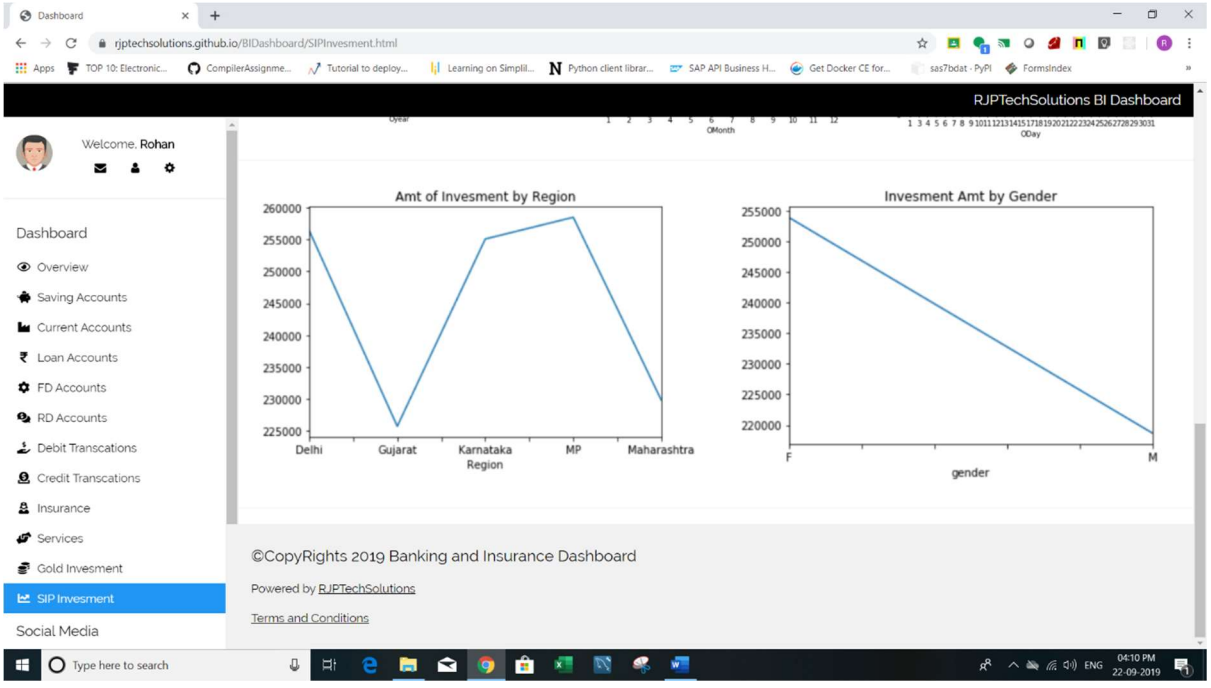
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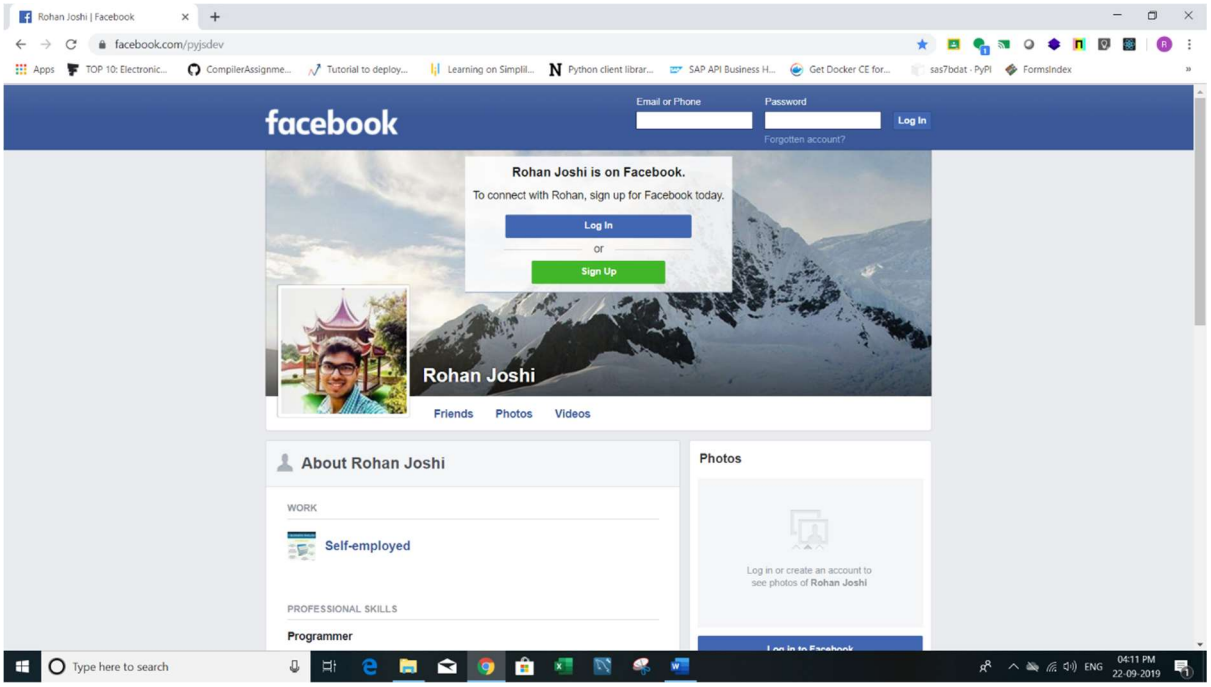

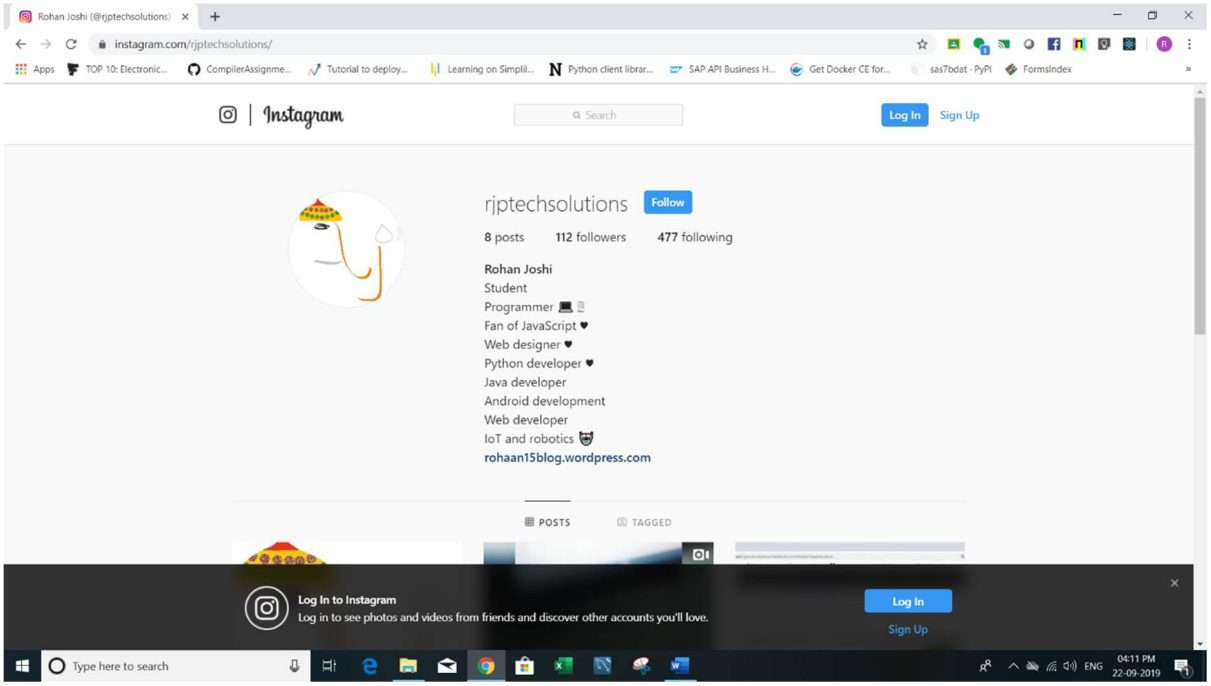


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14.9K Tweets
#WeAdmireKavin
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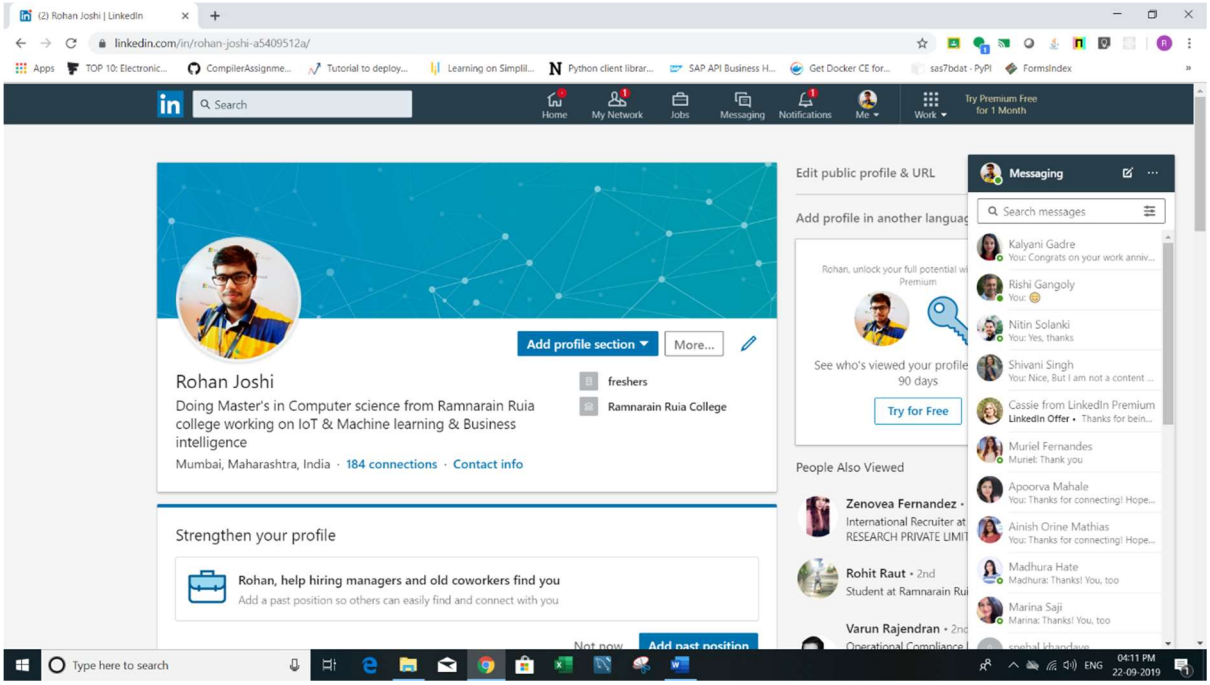
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You: Congrats on your work anniv...
Rishi Gangoly
You:
Nitin Solanki
You: Yes, thanks
Shivani Singh
You: Nice, But I am not a content ...
Cassie from LinkedIn Premium
LinkedIn Offer • Thanks for bein...
Muriel Fernandes
Muriel: Thank you
Apoorva Mahale
You: Thanks for connecting! Hope...
Ainish Orine Mathias
You: Thanks for connecting! Hope...
Madhura Hate
Madhura: Thanks! You, too
Marina Saji
Marina: Thanks! You, too
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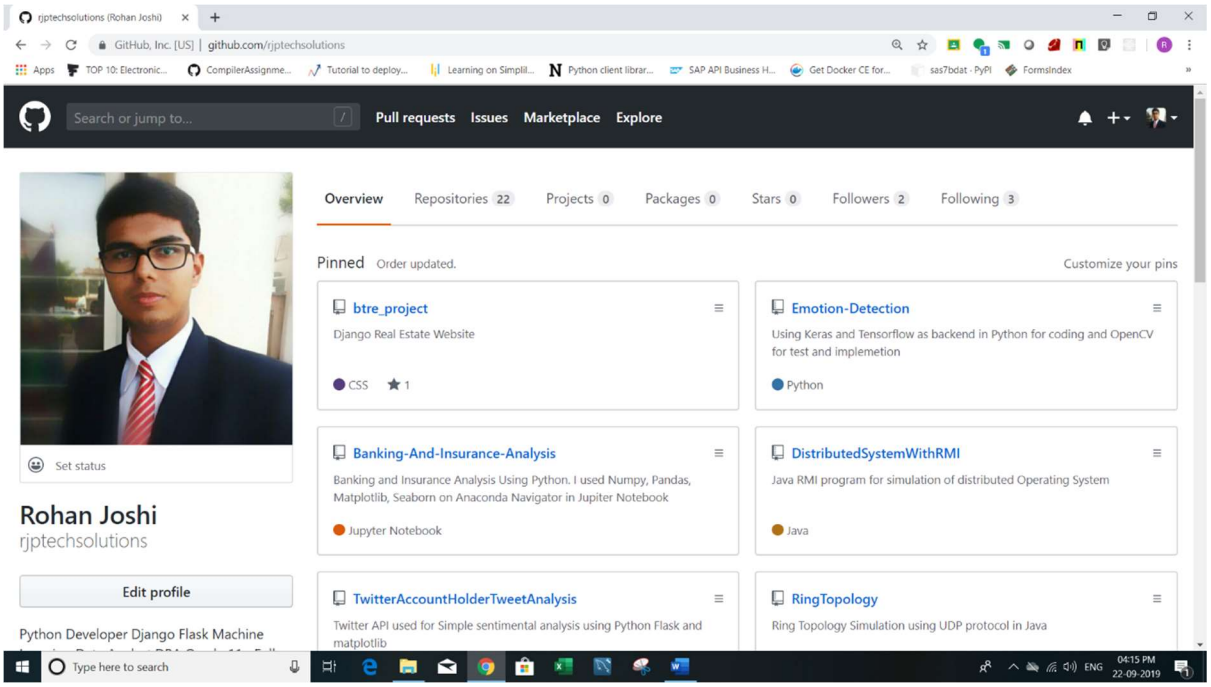
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Using Keras and Tensorflow as backend in Python for coding and OpenCV for test and implemetion
Python
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Banking and Insurance Analysis Using Python. I used Numpy, Pandas, Matplotlib, Seaborn on Anaconda Navigator in Jupiter Notebook
Jupyter Notebook
DistributedSystemWithRMI
Java RMI program for simulation of distributed Operating System
Java
TwitterAccountHolderTweetAnalysis
Twitter API used for Simple sentimental analysis using Python Flask and matplotlib
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Ring Topology Simulation using UDP protocol in Java
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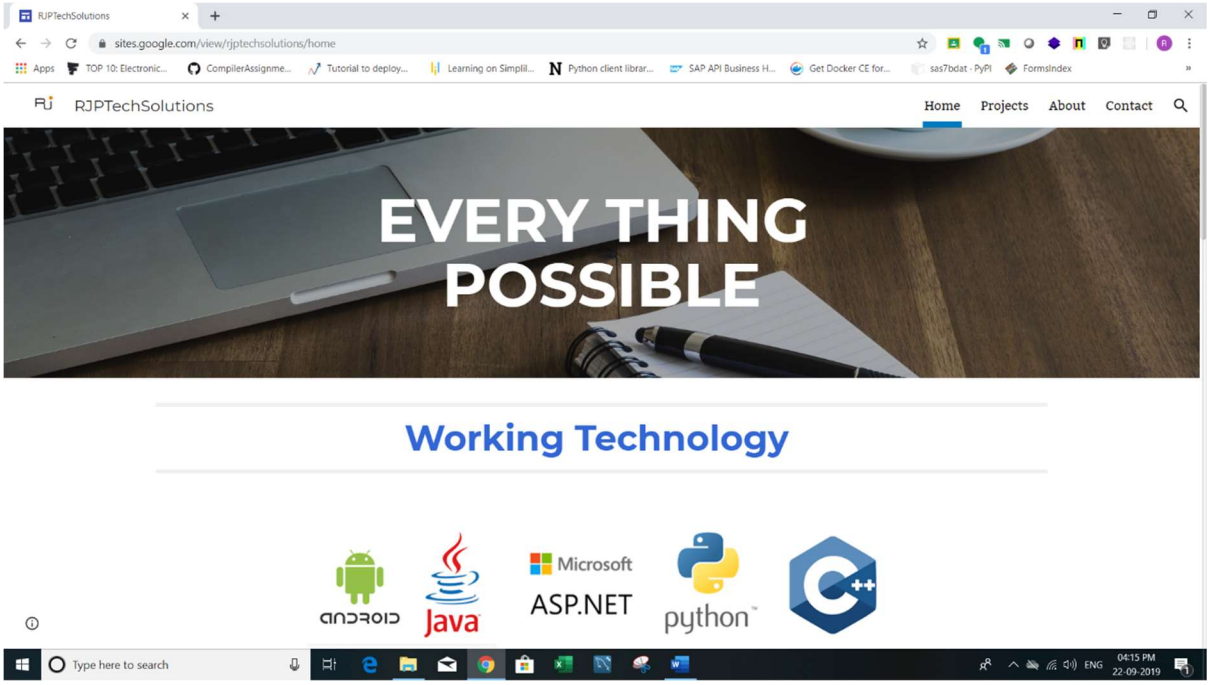
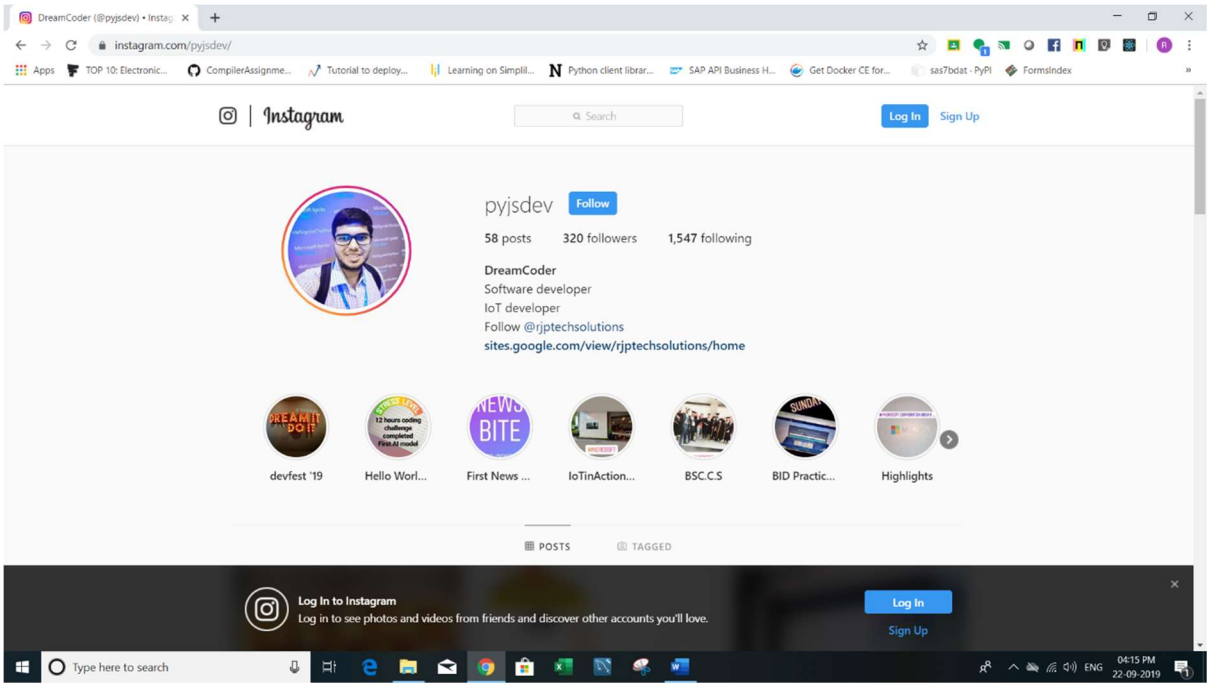
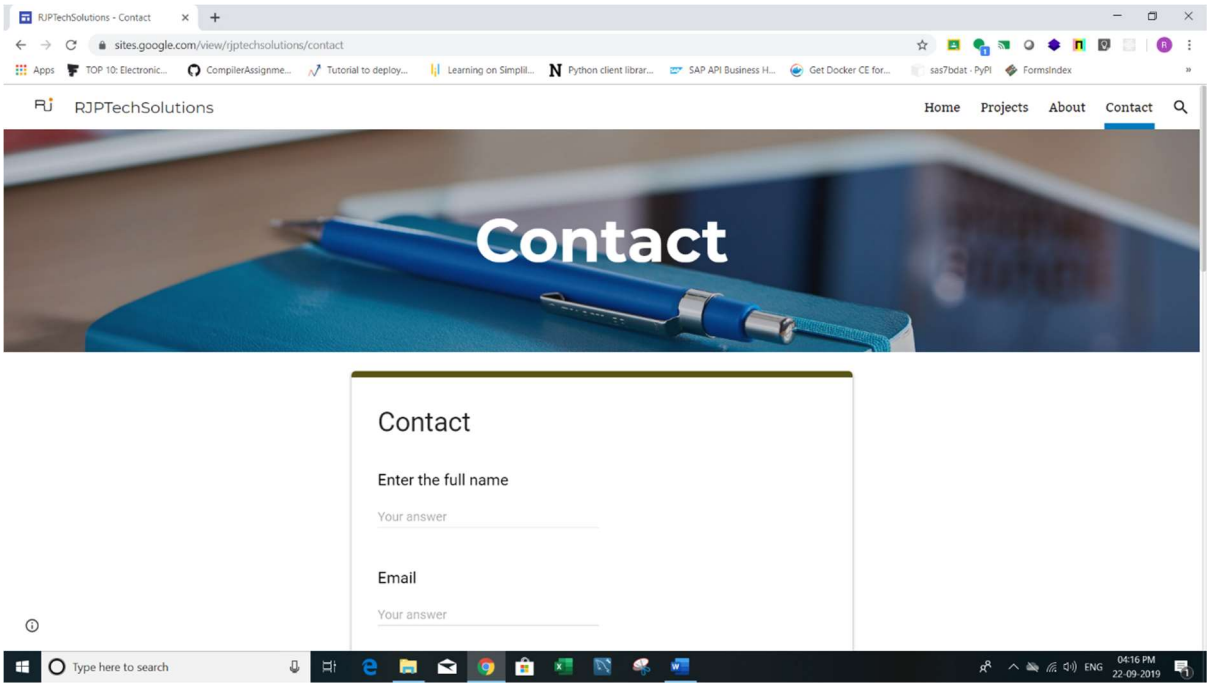
Developer Support:



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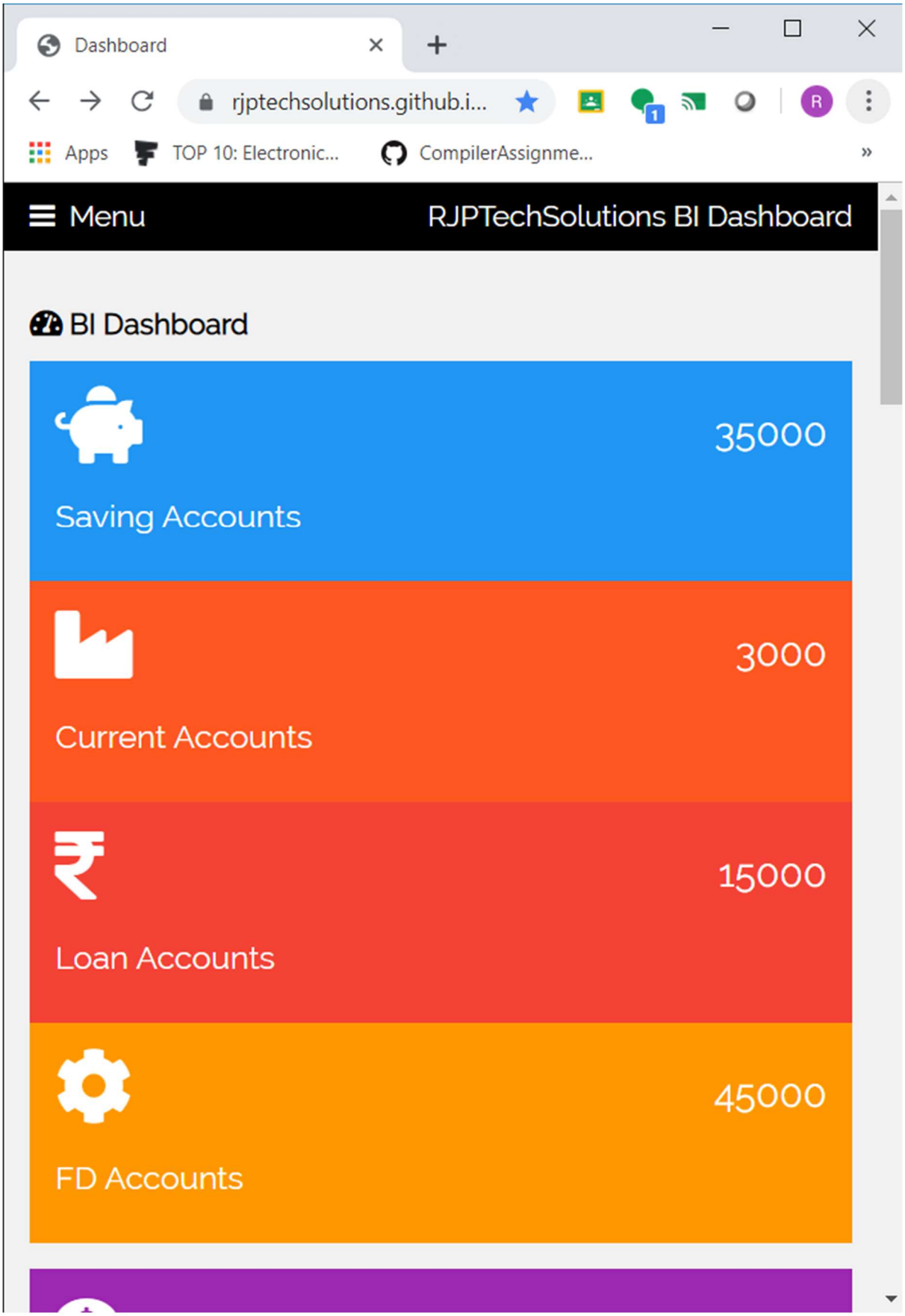
Mobile View :-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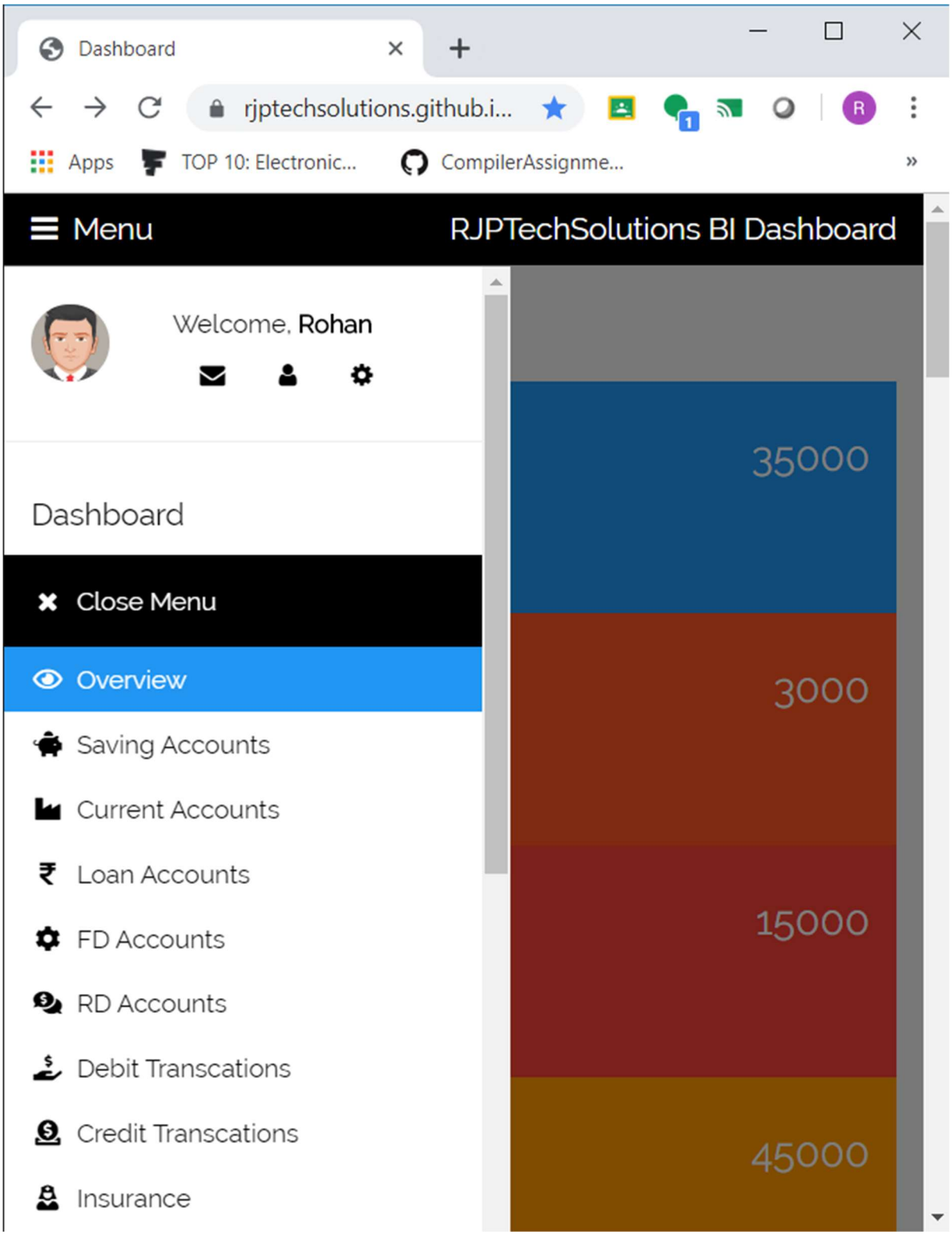
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RD Accounts
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Credit Transcations
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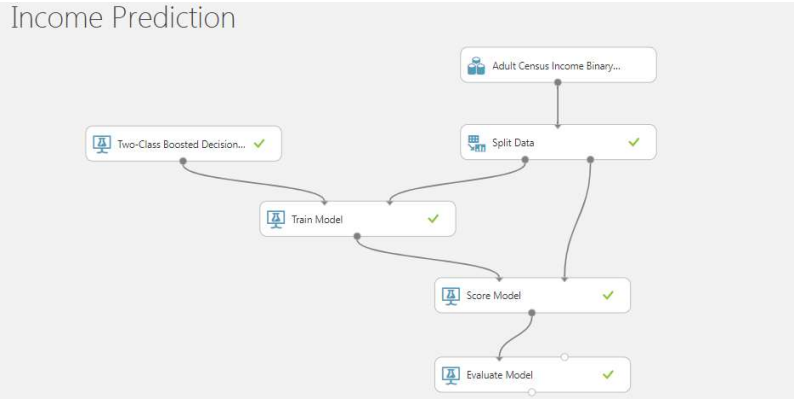
ML Models: -

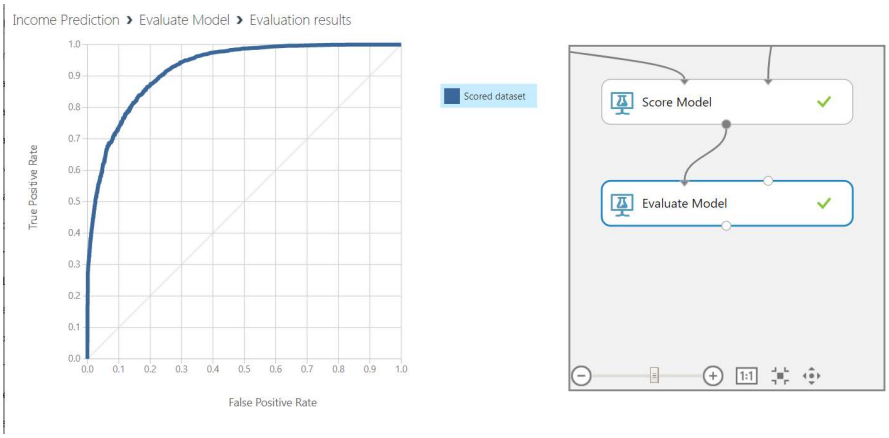
- **Customer Income Prediction Model**
- **Customer Churn Detection Model**
- **Evaluating Social Networking ads base customer purchasing policy's**
- **Credit Card Fraud Detection**
- **Credit Risk Prediction**
- **Automobile Price Prediction**
- **House Rate Prediction**

AI Model:

- **Customer Mood Detection**

Customer Income Prediction Model:





Income Prediction › Evaluate Model › Evaluation results

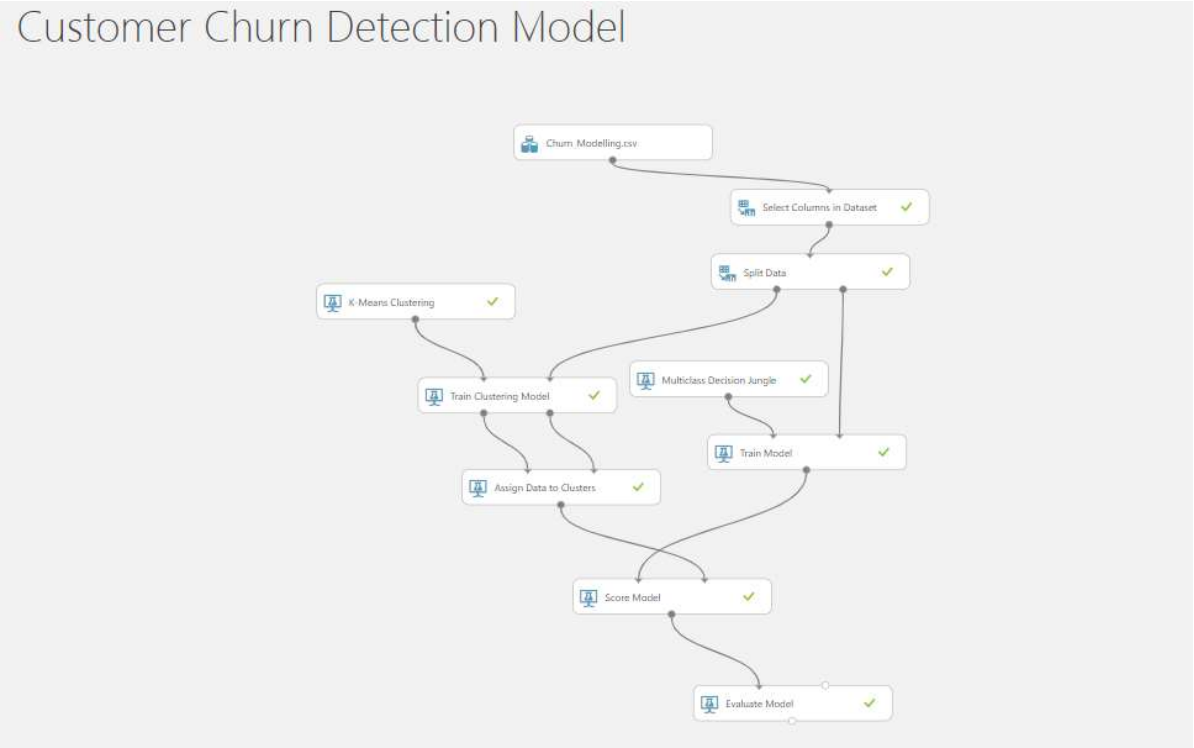
True Positive	False Negative	Accuracy	Precision	Threshold	AUC
1588	697	0.865	0.750	0.5	0.923

False Positive	True Negative	Recall	F1 Score
530	6244	0.695	0.721

Positive Label	Negative Label
>50K	<=50K

Score Bin	Positive Examples	Negative Examples	Fraction Above Threshold	Accuracy	F1 Score	Precision	Recall	Negative Precision	Negative Recall	Cumulative AUC
(0.900,1.000]	853	61	0.101	0.835	0.533	0.933	0.373	0.824	0.991	0.003
(0.800,0.900]	259	99	0.140	0.853	0.625	0.874	0.487	0.849	0.976	0.009
(0.700,0.800]	195	111	0.174	0.862	0.677	0.828	0.572	0.869	0.960	0.018
(0.600,0.700]	155	110	0.203	0.867	0.708	0.793	0.640	0.886	0.944	0.028
(0.500,0.600]	126	149	0.234	0.865	0.721	0.750	0.695	0.900	0.922	0.042
(0.400,0.500]	120	184	0.267	0.857	0.726	0.705	0.747	0.913	0.895	0.062
(0.300,0.400]	132	238	0.308	0.846	0.725	0.659	0.805	0.929	0.859	0.089
(0.200,0.300]	115	293	0.353	0.826	0.713	0.611	0.856	0.944	0.816	0.125
(0.100,0.200]	139	475	0.421	0.789	0.687	0.549	0.916	0.964	0.746	0.188
(0.000,0.100]	191	5054	1.000	0.252	0.403	0.252	1.000	1.000	0.000	0.923

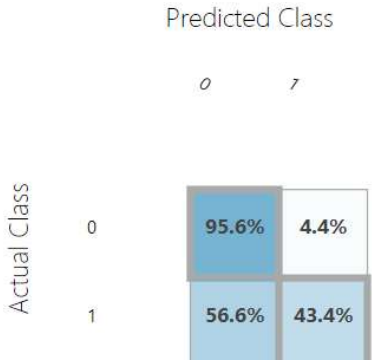
Customer Churn Detection Model:



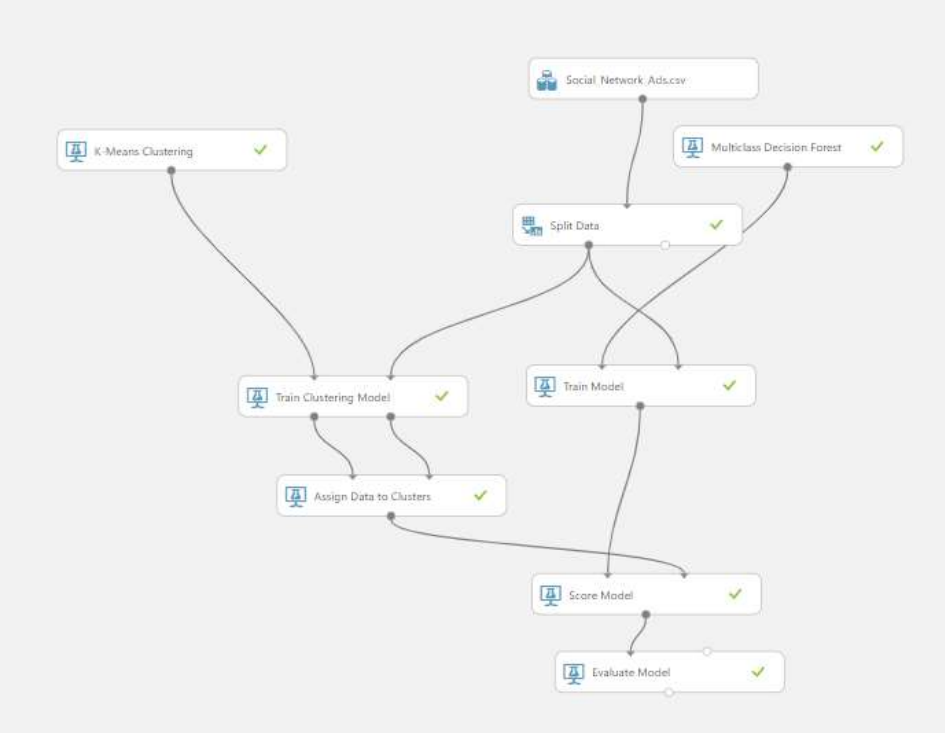
Customer Churn Detection Model › Evaluate Model › Evaluation results

Overall accuracy	0.850375
Average accuracy	0.850375
Micro-averaged precision	0.850375
Macro-averaged precision	0.79281
Micro-averaged recall	0.850375
Macro-averaged recall	0.695315

Confusion Matrix



Evaluating Social Networking ads base customer purchasing policy's:

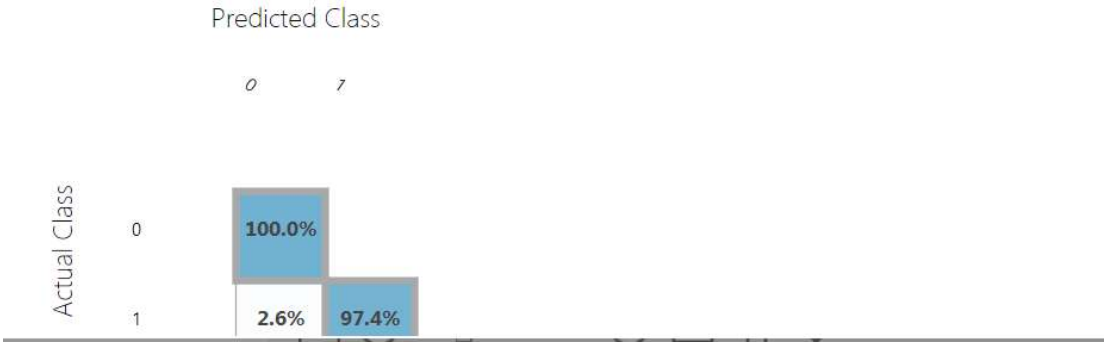


Social networking Ads to know customer purchasi... › Evaluate Model › Evaluation results

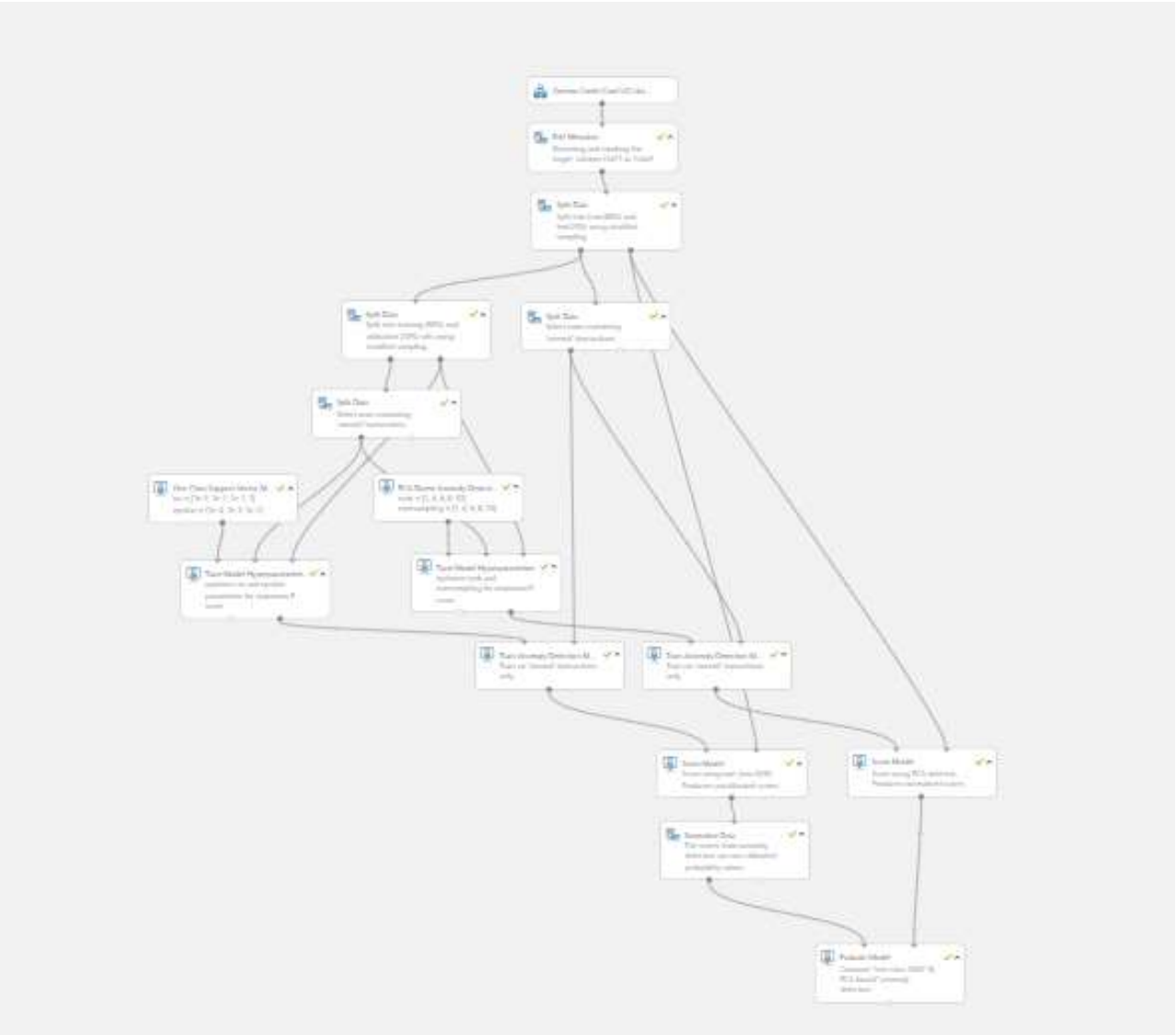
▲ Metrics

Overall accuracy	0.990625
Average accuracy	0.990625
Micro-averaged precision	0.990625
Macro-averaged precision	0.992823
Micro-averaged recall	0.990625
Macro-averaged recall	0.986842

▲ Confusion Matrix

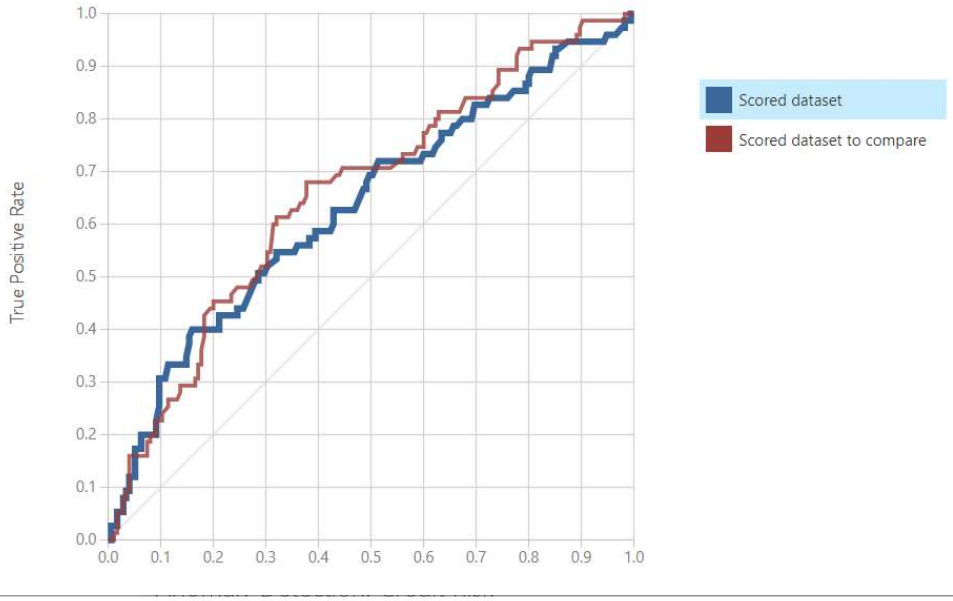


Credit Card Fraud Detection: -



Anomaly Detection: Credit Risk › Evaluate Model › Evaluation results

ROC PRECISION/RECALL LIFT



Anomaly Detection: Credit Risk › Evaluate Model › Evaluation results

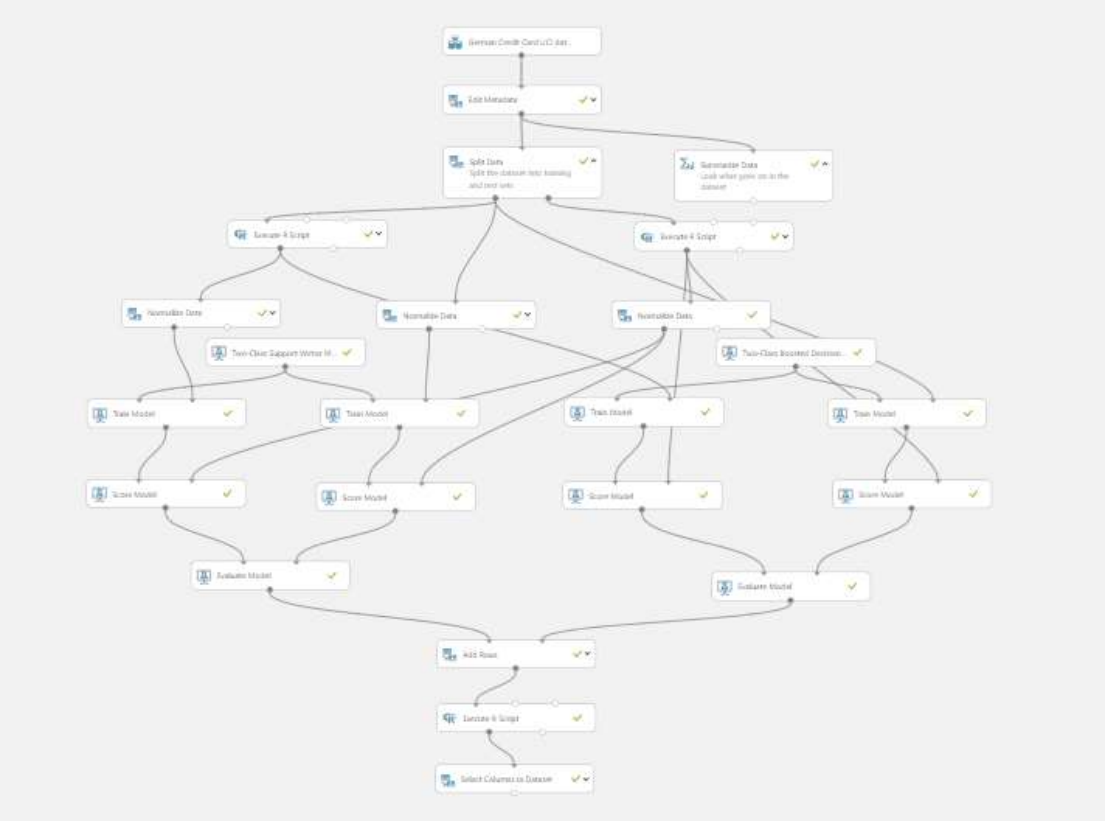
True Positive	False Negative	Accuracy	Precision	Threshold	AUC
15	60	0.716	0.577	0.5	0.633

False Positive	True Negative	Recall	F1 Score
11	164	0.200	0.297

Positive Label	Negative Label
2	1

Score Bin	Positive Examples	Negative Examples	Fraction Above Threshold	Accuracy	F1 Score	Precision	Recall	Negative Precision	Negative Recall	Cumulative AUC
(0.900,1.000]	0	0	0.000	0.700	0.000	1.000	0.000	0.700	1.000	0.000
(0.800,0.900]	0	0	0.000	0.700	0.000	1.000	0.000	0.700	1.000	0.000
(0.700,0.800]	1	1	0.008	0.700	0.026	0.500	0.013	0.702	0.994	0.000
(0.600,0.700]	2	2	0.024	0.700	0.074	0.500	0.040	0.705	0.983	0.000
(0.500,0.600]	12	8	0.104	0.716	0.297	0.577	0.200	0.732	0.937	0.005
(0.400,0.500]	27	54	0.428	0.608	0.462	0.393	0.560	0.769	0.629	0.133
(0.300,0.400]	28	85	0.880	0.380	0.475	0.318	0.933	0.833	0.143	0.497
(0.200,0.300]	5	25	1.000	0.300	0.462	0.300	1.000	1.000	0.000	0.633
(0.100,0.200]	0	0	1.000	0.300	0.462	0.300	1.000	1.000	0.000	0.633
(0.000,0.100]	0	0	1.000	0.300	0.462	0.300	1.000	1.000	0.000	0.633

Credit Risk Prediction:



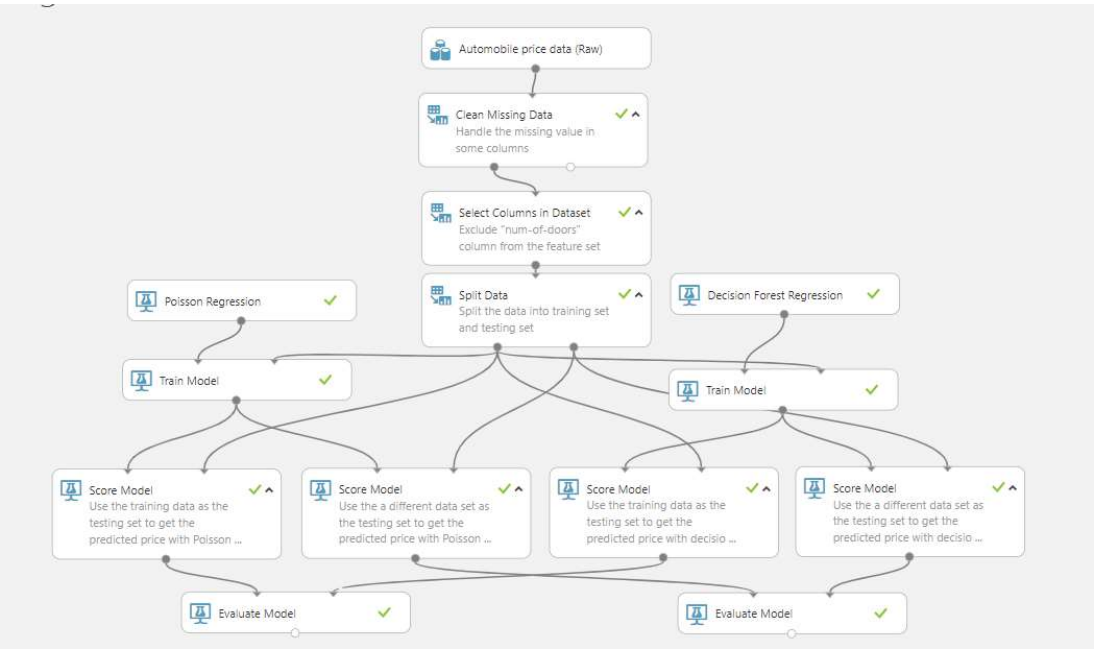
Binary Classfication: Credit risk prediction › Select Columns in Dataset › Results dataset

rows	columns
4	3

view as

Algorithm	Training	Accuracy
SVM	weighted	0.704545
SVM	unweighted	0.56
Boosted Decision Tree	weighted	0.659091
Boosted Decision Tree	unweighted	0.582727

Automobile Price Prediction:



Regression: Automobile Price Prediction › Evaluate Model › Evaluation results

rows 2 columns 6

view as

	Negative Log Likelihood	Mean Absolute Error	Root Mean Squared Error	Relative Absolute Error	Relative Squared Error	Coefficient of Determination
	Infinity	3188.522151	4744.027861	0.454332	0.264362	0.735638
	375.110236	2324.806417	3850.840643	0.331261	0.174187	0.825813

Regression: Automobile Price Prediction › Evaluate Model › Evaluation results

rows 2 columns 6

view as

	Negative Log Likelihood	Mean Absolute Error	Root Mean Squared Error	Relative Absolute Error	Relative Squared Error	Coefficient of Determination
	Infinity	2669.07619	4178.917271	0.47386	0.294259	0.705741
	1384.706175	1091.958769	1991.194483	0.193863	0.066808	0.933192

House Rate Prediction: -

jupyter housing project Last Checkpoint: 07/30/2019 (autosaved)

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Trusted Python 3

Run Code

In [3]:
```
#import libraries
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

In [4]:
```
#import dataset
data = pd.read_csv('housingData-Real.csv')
```

In [5]:
```
data.head()
```

Out[5]:

	id	date	price	bedrooms	bathrooms	sqft_living	sqft_lot	floors	waterfront	view	...	grade	sqft_above	sqft_basement	yr_built
0	7129300520	20141013T000000	221900.0	3	1.00	1180	5650	1.0	0	0	...	7	1180	0	1955
1	6414100192	20141209T000000	538000.0	3	2.25	2570	7242	2.0	0	0	...	7	2170	400	1951
2	5631500400	20150225T000000	180000.0	2	1.00	770	10000	1.0	0	0	...	6	770	0	1933
3	2487200875	20141209T000000	604000.0	4	3.00	1960	5000	1.0	0	0	...	7	1050	910	1965
4	1954400510	20150218T000000	510000.0	3	2.00	1680	8080	1.0	0	0	...	8	1680	0	1987

5 rows × 21 columns

In [39]:
```
#data.info()
```

In [7]:
```
# select your columns
livingspace = data['sqft_living']
price = data['price']
```

In [8]:
```
#convert livingspace into 2D matrix
#X usually is in CAPS
x = np.array(livingspace).reshape(-1, 1)
```

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Logout

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Trusted Python 3

Run Code

In [9]:
```
#convert price into 2D matrix
y = np.array(price)
```

In [10]:
```
y
```

Out[10]:
```
array([221900., 538000., 180000., ..., 402101., 400000., 325000.])
```

In [11]:
```
# convert the data into test and training
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=1/3)
```

In [12]:
```
x_test
```

Out[12]:
```
array([[3530],
       [2890],
       [1677],
       ...,
       [ 840],
       [4690],
       [1240]], dtype=int64)
```

In [13]:
```
#pass your data into linear Regression model
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(x_train, y_train)
```

Out[13]:
```
LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None,
         normalize=False)
```

In [14]:
```
#create a predictor
predictor = regressor.predict(x_test)
```

In [15]:
```
predictor
```

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Run Code

In [13]:
```
#pass your data into Linear Regression model
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(x_train, y_train)
```

Out[13]:
```
LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None,
         normalize=False)
```

In [14]:
```
#create a predictor
predictor = regressor.predict(x_test)
```

In [15]:
```
predictor
```

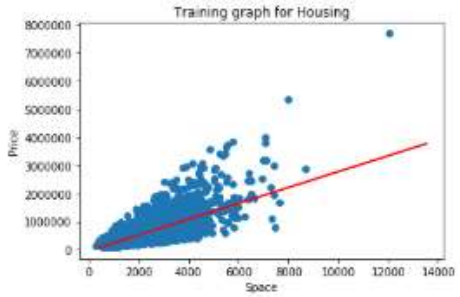
Out[15]:
```
array([ 951150.57155768,  770432.35471377,  427914.85935179, ...,
        191569.3163856 , 1278702.33958727,  304518.20191305])
```

In [17]:
```
#plot for training dataset
plt.scatter(x_train, y_train)
plt.plot(x_train, regressor.predict(x_train), color='red')
plt.title('Training graph for Housing')
plt.xlabel('Space')
plt.ylabel('Price')
```

Out[17]:
```
Text(0, 0.5, 'Price')
```

In [18]:
```
#plot for test dataset
plt.scatter(x_test, y_test)
plt.plot(x_train, regressor.predict(x_train), color='red')
plt.title('Training graph for Housing')
plt.xlabel('Space')
plt.ylabel('Price')
```

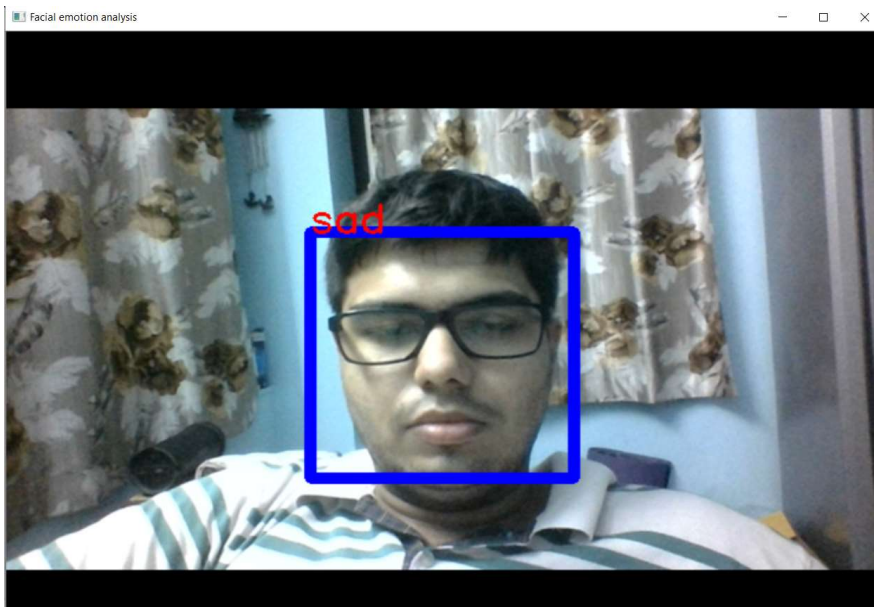
Out[18]:
```
Text(0, 0.5, 'Price')
```

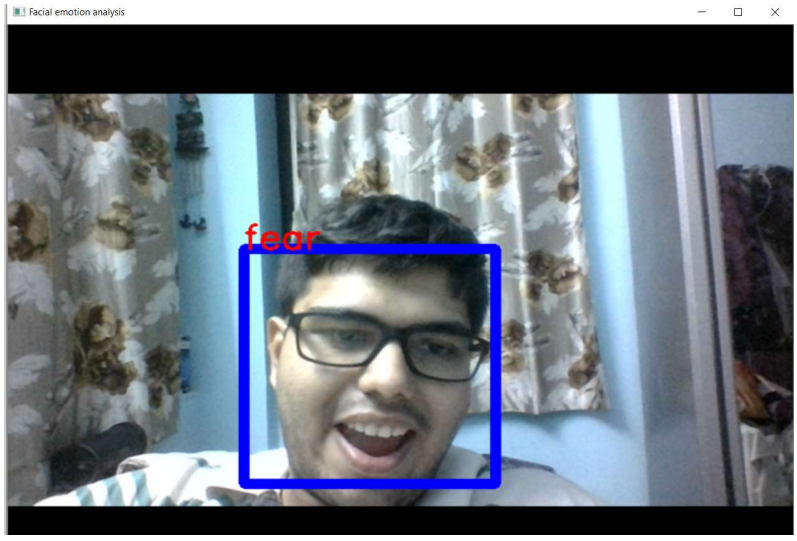


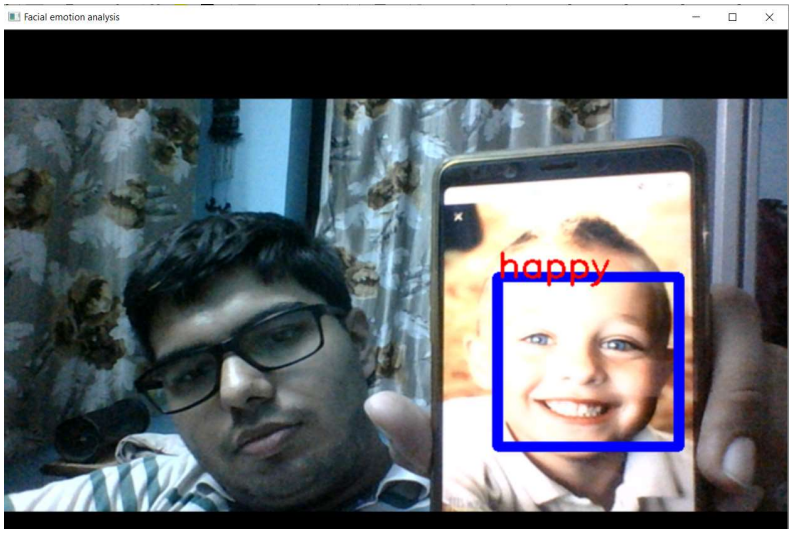
In [ ]:

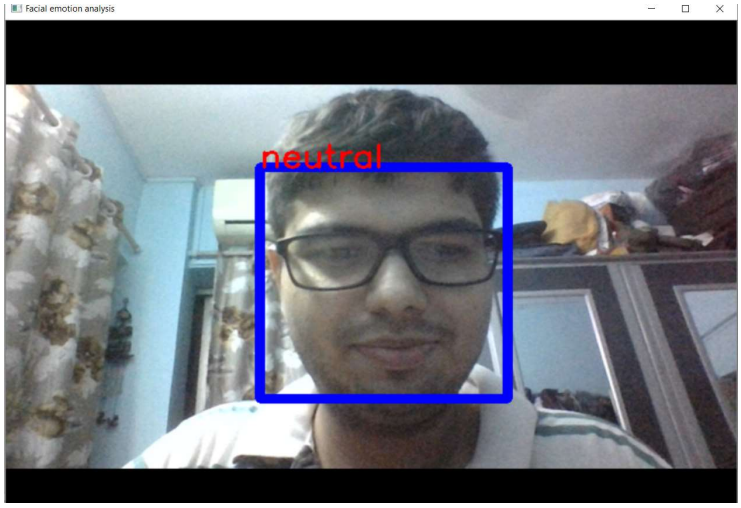
AI Model:

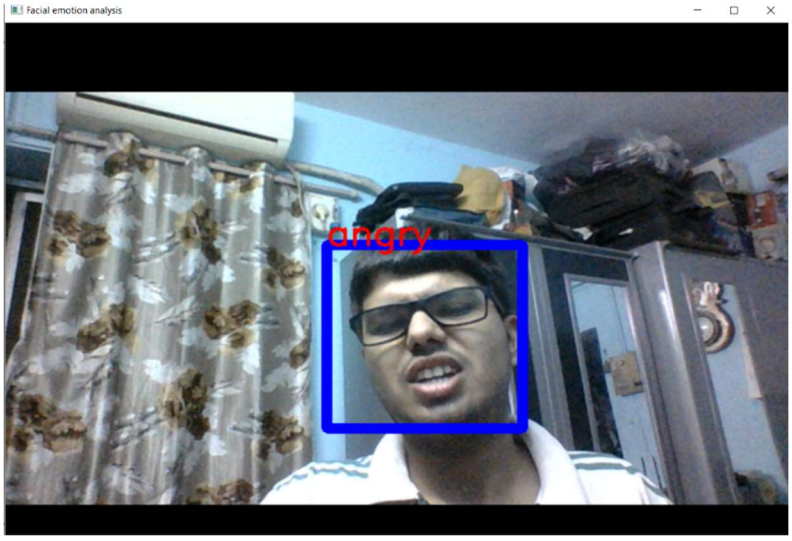
Customer Mood Detection Using AI

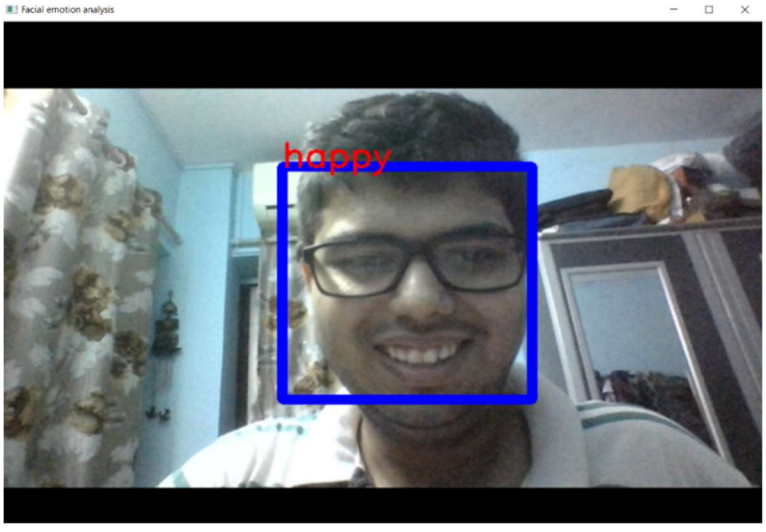







Facial emotion analysis
neutral


Facial emotion analysis
angry


Facial emotion analysis
happy

Google Assistance Query set :-

Chapter 5
Feature Enhancements

At this movement my project is divide into four parts. First is Analytics, Second Machine Learning Model and Third is AI Model and last but not least Google Assistants support. After getting actual data from bank the analysis is changed because its dummy data generated by me and many attributes are not cover in this. Also after getting data we need to re-train model or may be do some changes in it.

- Connecting main Banking application to analytics.
- Connecting Analysis + ML Model +AI Model + Google Assistant together in one Application
- Adding Customer Wealth Management Model (currently in Alpha Stage).
- Complete Deployment on Cloud.

Chapter 6
Summary

In this project I have done data analysis, creating Machine Learning and Artificial Intelligence models. This project is fully functional and it is capable of working in live environment.

It is very helpful to understand the customer and their needs also understand the region wise diversity. It helps to plan and building strategies, also to capture market.

These ML and AI models definitely help to understand the customer more deeply and make more grow in the field.

Chapter 7

References and Bibliography

- https://numpy.org/
- https://pandas.pydata.org/
- https://scikit-learn.org/
- https://matplotlib.org/
- https://seaborn.pydata.org/
- https://www.tensorflow.org/
- http://keras.io/
- https://opencv-python-tutroals.readthedocs.io/en/latest/py_tutorials/py_setup/py_intro/py_intro.html
- https://www.w3schools.com/w3css/
- https://stackoverflow.com/
- https://www.google.com/
- https://www.youtube.com/

Chapter 8

Index & Acronyms

A

Account :- an arrangement made with a bank whereby one may deposit and withdraw money and in some cases be paid interest.

ATM Department :- It is for resolving queries credit and debit Transactions, Mobile banking, ATM related queries, net banking queries and many more.

B

Balance :- The amount of money in your bank account**.**

C

CASA :- Current and Saving Account Balance

Credit :- A credit is an **accounting** entry that either increases a liability or equity account, or decreases an asset or expense account.

Current Account :- Business Account only for business purpose and don't have ROI

Credit Department :- It involves Loan and Credit System departments.

D

Debit :- A **debit** is an **accounting** entry that either increases an asset or expense account, or decreases a liability or equity account. It is positioned to the left in an **accounting** entry.

Deposit :- A deposit is the act of placing cash with some entity, most commonly with a financial institution such as a bank.

E

ECS :- ECS stands for Electronic Clearing Service. It is an electronic mode of funds transfer from one bank account to another bank account. It also facilitates electronic credit/debit transaction

associated with customer's account. It is usually used for transactions that are repetitive or periodic in nature.

EMI :- An equated monthly instalment (EMI) is a fixed payment amount made by a borrower to a lender at a specified date each calendar month. Equated monthly instalments are used to pay off both interest and principal each month, so that over a specified number of years the loan is paid off in full.

F

FD:- A fixed deposit (FD) is a financial instrument provided by banks or NBFCs which provides investors a higher rate of interest than a regular savings account, until the given maturity date.

FDR :- FD and RD Department.

I

Insurance :- an arrangement by which a company or the state undertakes to provide a guarantee of compensation for specified loss, damage, illness, or death in return for payment of a specified premium.

Investment Department :- It involves Gold and SIP

Insurance Department :- It involves Insurance department.

L

Loan :- A **loan** means borrow money, against property, or other material goods given to another party in exchange for future repayment of the **loan** value or principal amount, along with interest or finance charges.

N

Net-worth :- Current Account have high amount balance or maximum loan take by a business account

O

Operational Department :- involves Saving and Current Accounts.

R

ROI :- Rate of Interest

Rate :- Rate of Interest

RD :- A recurring deposit is a special kind of term deposit offered by banks which help people with regular incomes to deposit a fixed amount every month into their recurring deposit account and earn interest at the rate applicable to fixed deposits.

S

Saving Account :- For general account type any one open/create a saving account. It has ROI

SIP :- A Systematic Investment Plan or SIP is a mode for investing money in mutual funds. SIP allows you to invest a certain pre-determined amount at a regular interval (weekly, monthly, quarterly, etc.).

T

Tenure :- Time Period

Transaction/Tx :- a financial event that causes a change in financial position means transferring amt from one account to another count

W

Withdrawal:- Taking money from your bank account