

WEBSITE TRAFFIC ANALYSIS

SUBMITTED BY,

V.DHARSHINI

S.JUSVANTHIHA

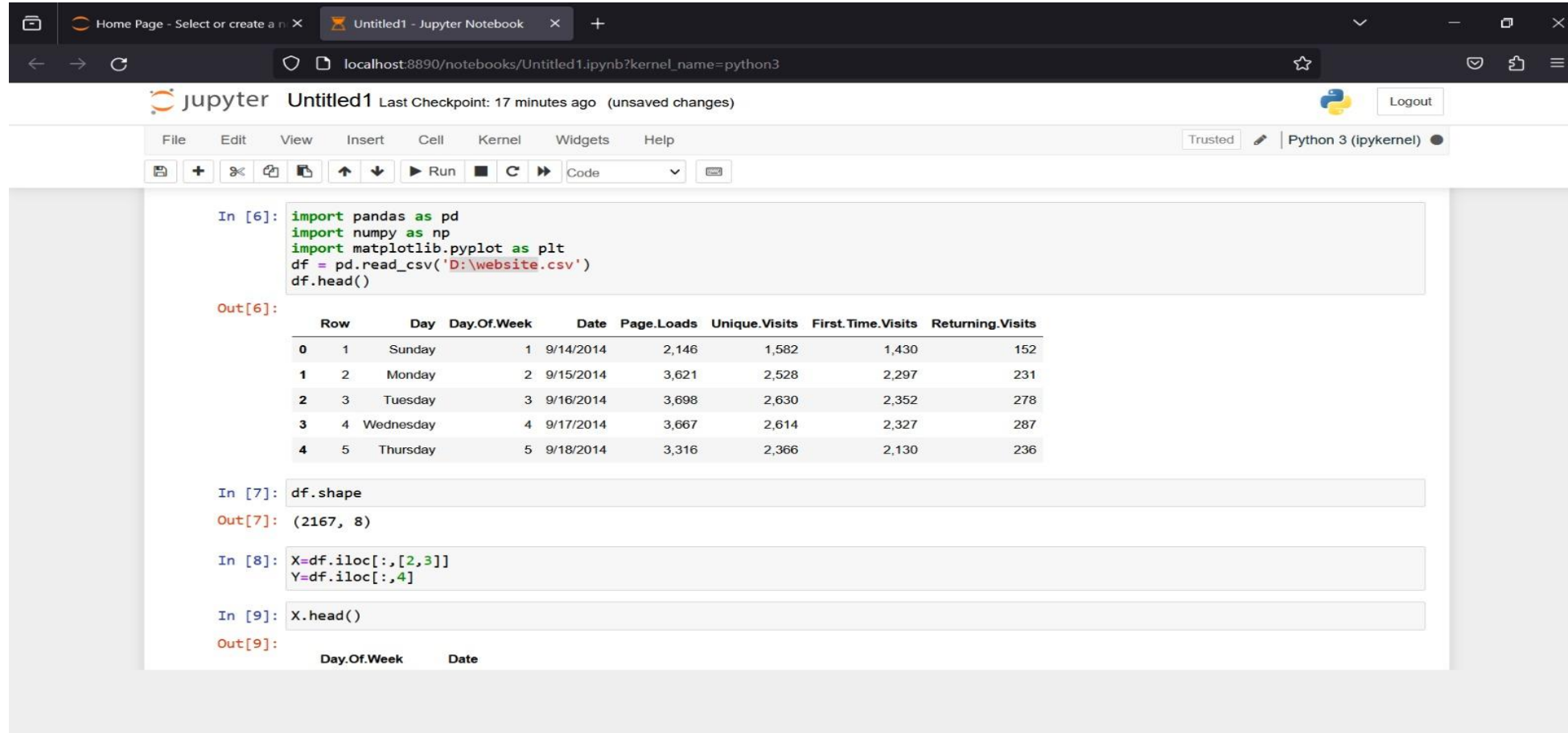
V.KAMALA

K.NAGALAKSHMI

MODULES:

- 1) SPLITTING THE TRAINING AND TESTING DATA
- 2) APPLYING SUPPORT VECTOR MACHINES
- 3) CREATING DASHBOARD USING IBM COGNOS
- 4) CREATING REPORT USING IBM COGNOS
- 5) STATISTICAL TESTS USING TREEMAP

Step 1: SPLITTING THE TESTING AND TRAINING DATA



The screenshot displays a Jupyter Notebook environment. The browser address bar shows the URL `localhost:8890/notebooks/Untitled1.ipynb?kernel_name=python3`. The notebook interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with icons for file operations and execution. The kernel is identified as 'Python 3 (ipykernel)'.

The notebook contains the following code and output:

```
In [6]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
df = pd.read_csv('D:\website.csv')
df.head()
```

Out[6]:

	Row	Day	Day.Of.Week	Date	Page.Loads	Unique.Visits	First.Time.Visits	Returning.Visits
0	1	Sunday	1	9/14/2014	2,146	1,582	1,430	152
1	2	Monday	2	9/15/2014	3,621	2,528	2,297	231
2	3	Tuesday	3	9/16/2014	3,698	2,630	2,352	278
3	4	Wednesday	4	9/17/2014	3,667	2,614	2,327	287
4	5	Thursday	5	9/18/2014	3,316	2,366	2,130	236

```
In [7]: df.shape
Out[7]: (2167, 8)
```

```
In [8]: X=df.iloc[:,[2,3]]
Y=df.iloc[:,4]
```

```
In [9]: X.head()
Out[9]:
```

	Day.Of.Week	Date
--	-------------	------

In [9]: X.head()

Out[9]:

	Day.Of.Week	Date
0	1	9/14/2014
1	2	9/15/2014
2	3	9/16/2014
3	4	9/17/2014
4	5	9/18/2014

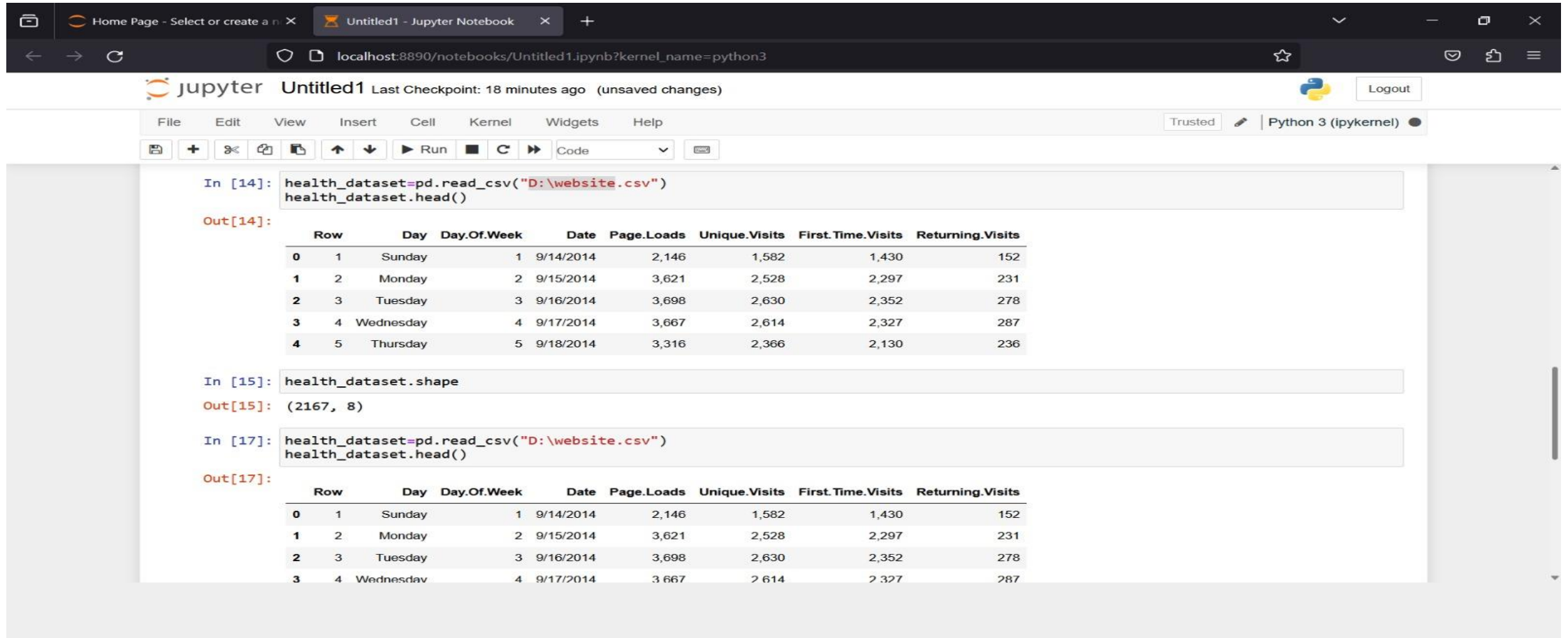
```
In [10]: from sklearn.model_selection import train_test_split
X_Train,X_Test,Y_Train,Y_Test=train_test_split(X,Y,test_size=0.25,random_state=0)
```

```
In [11]: print("Training data : ",X_Train.shape)
print("Testing data : ",X_Test.shape)
```

```
Training data : (1625, 2)
Testing data : (542, 2)
```

```
In [12]: import numpy as np
import pandas as pd
from sklearn.preprocessing import StandardScaler
from sklearn.model_selection import train_test_split
from sklearn import svm
from sklearn.metrics import accuracy_score
```

Step 2:Applying Support vector Machines and loss calculation



The screenshot shows a Jupyter Notebook titled 'Untitled1' running on a local host. The notebook contains three code cells. The first cell (In [14]) loads a CSV file from 'D:\website.csv' and displays its head. The second cell (In [15]) shows the shape of the dataset. The third cell (In [17]) repeats the loading and head display. The output of the first and third cells shows a table with 8 columns: Row, Day, Day.Of.Week, Date, Page.Loads, Unique.Visits, First.Time.Visits, and Returning.Visits. The data spans from 9/14/2014 to 9/18/2014.

```
In [14]: health_dataset=pd.read_csv("D:\website.csv")
health_dataset.head()
```

```
Out[14]:
```

	Row	Day	Day.Of.Week	Date	Page.Loads	Unique.Visits	First.Time.Visits	Returning.Visits
0	1	Sunday	1	9/14/2014	2,146	1,582	1,430	152
1	2	Monday	2	9/15/2014	3,621	2,528	2,297	231
2	3	Tuesday	3	9/16/2014	3,698	2,630	2,352	278
3	4	Wednesday	4	9/17/2014	3,667	2,614	2,327	287
4	5	Thursday	5	9/18/2014	3,316	2,366	2,130	236

```
In [15]: health_dataset.shape
```

```
Out[15]: (2167, 8)
```

```
In [17]: health_dataset=pd.read_csv("D:\website.csv")
health_dataset.head()
```

```
Out[17]:
```

	Row	Day	Day.Of.Week	Date	Page.Loads	Unique.Visits	First.Time.Visits	Returning.Visits
0	1	Sunday	1	9/14/2014	2,146	1,582	1,430	152
1	2	Monday	2	9/15/2014	3,621	2,528	2,297	231
2	3	Tuesday	3	9/16/2014	3,698	2,630	2,352	278
3	4	Wednesday	4	9/17/2014	3,667	2,614	2,327	287

```
In [18]: health_dataset.describe()
```

```
Out[18]:
```

	Row	Day.Of.Week
count	2167.000000	2167.000000
mean	1084.000000	3.997231
std	625.703338	2.000229
min	1.000000	1.000000
25%	542.500000	2.000000
50%	1084.000000	4.000000
75%	1625.500000	6.000000
max	2167.000000	7.000000

```
In [*]: health_dataset['obs_consequence'].value_counts()
```

```
In [ ]:
```



Logout

Trusted



Python 3 (ipykernel)

```
health_dataset.head()
```

Out[17]:

	Row	Day	Day.Of.Week	Date	Page.Loads	Unique.Visits	First.Time.Visits	Returning.Visits
0	1	Sunday	1	9/14/2014	2,146	1,582	1,430	152
1	2	Monday	2	9/15/2014	3,621	2,528	2,297	231
2	3	Tuesday	3	9/16/2014	3,698	2,630	2,352	278
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75%	1625.500000	6.000000
max	2167.000000	7.000000

Step 3: CREATING DASHBOARD USING IBM COGNOS

The screenshot displays the IBM Cognos Analytics interface. The browser's address bar shows the URL: `us1.ca.analytics.ibm.com/bi/?perspective=content&tab=myContent&folder=IA56C62FA0F114F1DA4266F935ADDCC87`. The page title is "Content". Below the title, there are tabs for "My content", "Team content", "Samples", and "Favorites". A blue bar at the top of the content area indicates "1 item selected". To the right of this bar are buttons for "More +", "Create", "Details", "Delete", and "Cancel". The main content area shows a card for "public health awareness" with a "Last Modified" timestamp of "10/17/2023, 10:43 AM". A context menu is open over this card, listing the following actions: "Edit data module", "Create report", "Create exploration", "Create dashboard", "Create data module", "Create data set", "Share", "Copy or move to", "Add shortcut", "Edit name and description", "Add to favorites", "Properties", "Details", and "Delete". The bottom of the screen shows a Windows taskbar with various application icons, the system clock at 5:40 PM on 10/25/2023, and the language set to ENG IN.

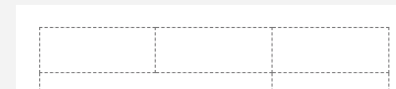
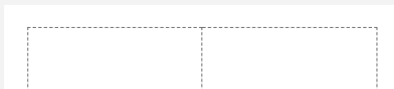
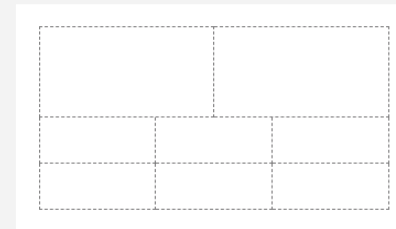
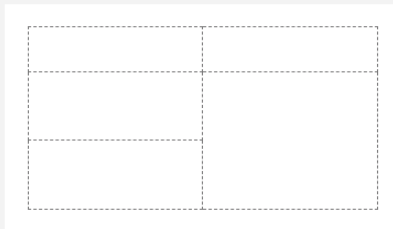
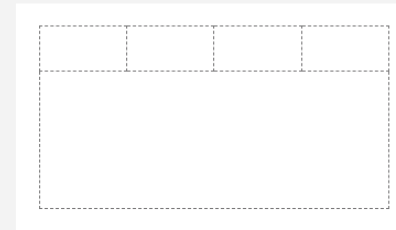
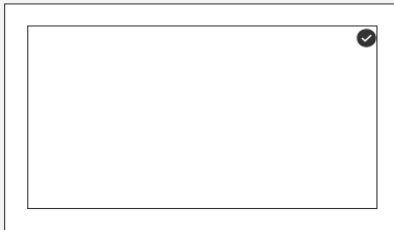
Create a dashboard

Select a template for your dashboard

Cancel Create

Tabbed

Infographic



Project Submission Part 3: Devel x Project Submission Form - Phas x Daily website visitors (time serie x My IBM x * New dashboard x

us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=dashboard_12e3d031-7a40-464a-83f5-0713c85d413f&ui_appbar=true&options%5BdisableGlassPrefetch%5D=true&options%5Bcoll...

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IBM Cognos Analytics | * New dashboard 30

Edit Analytics Filters Fields Properties

Selected sources /

daily-website-visitors.csv

Navigation paths

daily-website-visitors.csv

Row

Day

Day.Of.Week

Date

Page.Loads

Unique.Visits

First.Time.Visits

Returning.Visits

Tab 1

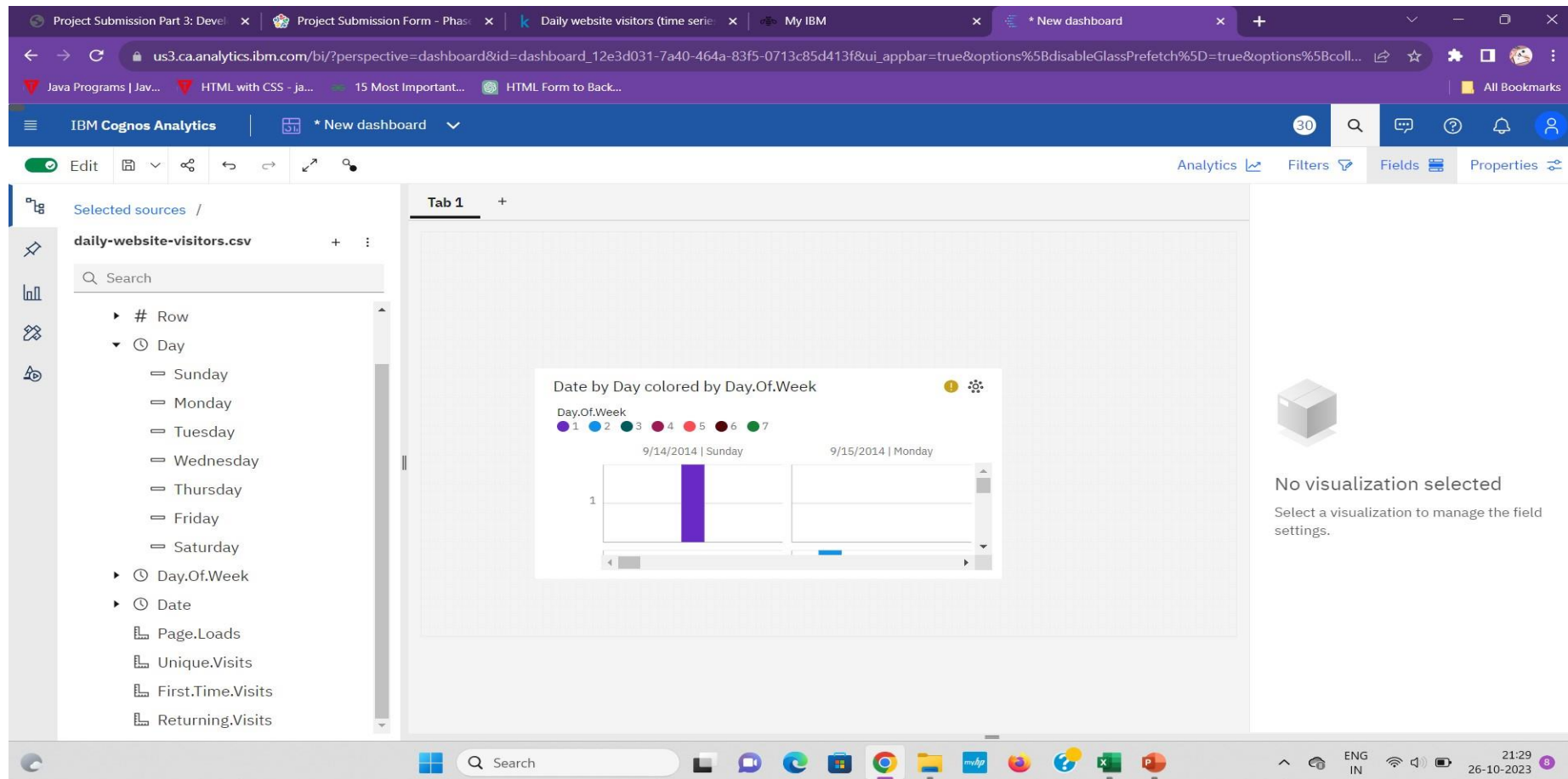
Returning.Visits

1.11M

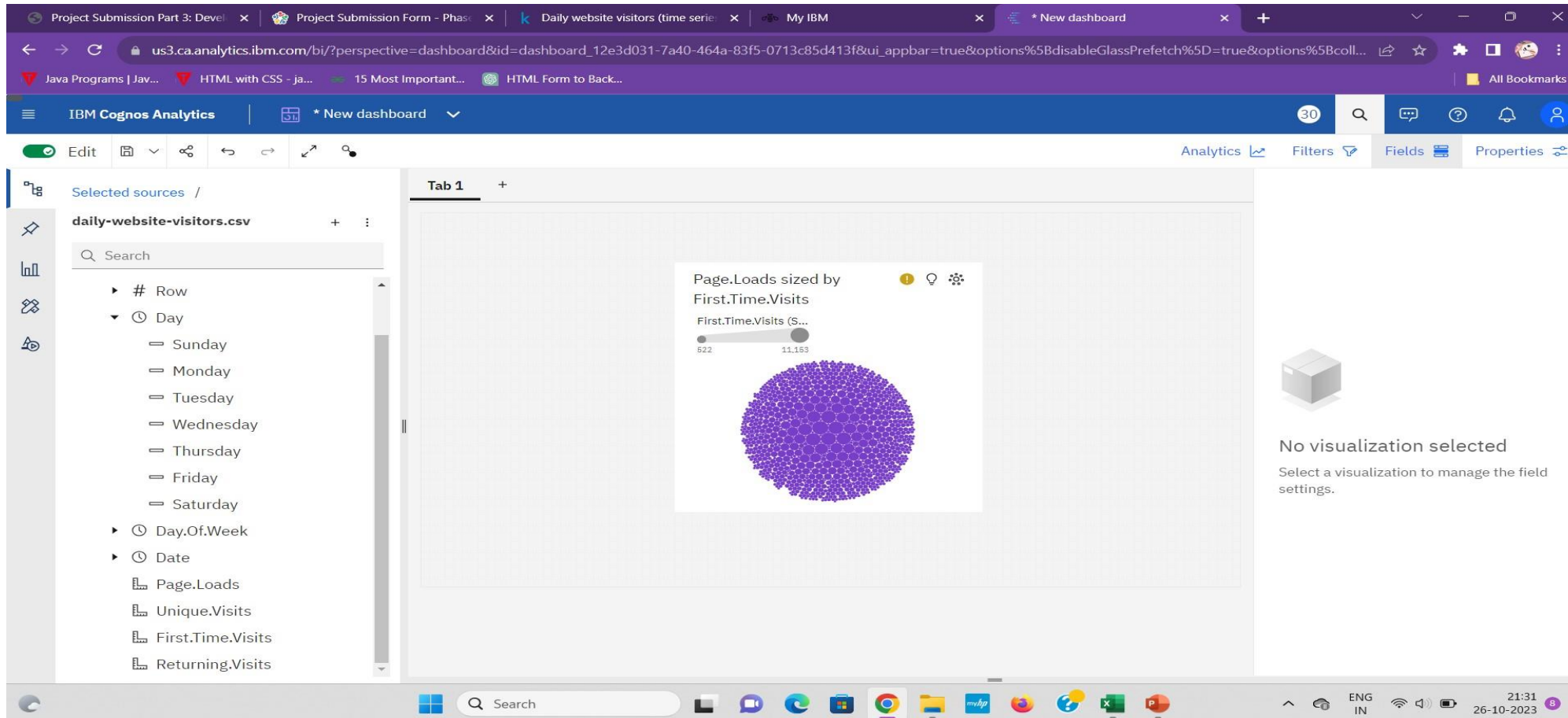
Returning.Visits

21:24 26-10-2023

Creating bar graph using dashboard



Creating packed ball structure using dashboard



Creating area using dashboard

The screenshot displays the IBM Cognos Analytics interface. The top navigation bar includes the IBM Cognos Analytics logo and a search bar. The left sidebar shows the 'Selected sources' pane with a tree view of data sources. The main workspace is titled 'Tab 1' and contains a visualization placeholder. The placeholder shows a preview of an area chart titled 'Unique.Visits by Day colored by Date'. The chart has a legend with dates from 9/14/2014 to 9/19/2014. The placeholder also displays the text 'No visualization selected' and 'Select a visualization to manage the field settings.'.

Project Submission Part 3: Devel x Project Submission Form - Phas x Daily website visitors (time series x My IBM x * New dashboard x

us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=dashboard_1fc441dc-1cea-4cb0-9f4b-43f2c2b96a15&ui_appbar=true&options%5BdisableGlassPrefetch%5D=true&options%5Bcoll...

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IBM Cognos Analytics | * New dashboard

Edit Analytics Filters Fields Properties

Selected sources /

daily-website-visitors.csv

Navigation paths

daily-website-visitors.csv

Row

Day

Day.Of.Week

Date

Page.Loads

Unique.Visits

First.Time.Visits

Returning.Visits

Tab 1

Unique.Visits by Day colored by Date

Date

9/14/2014 9/15/2014 9/16/2014 9/17/2014 9/18/2014 9/19/2014

Friday Monday

No visualization selected

Select a visualization to manage the field settings.

28°C Mostly clear Search ENG IN 21:55 26-10-2023

CREATING REPORT USING IBM COGNOS

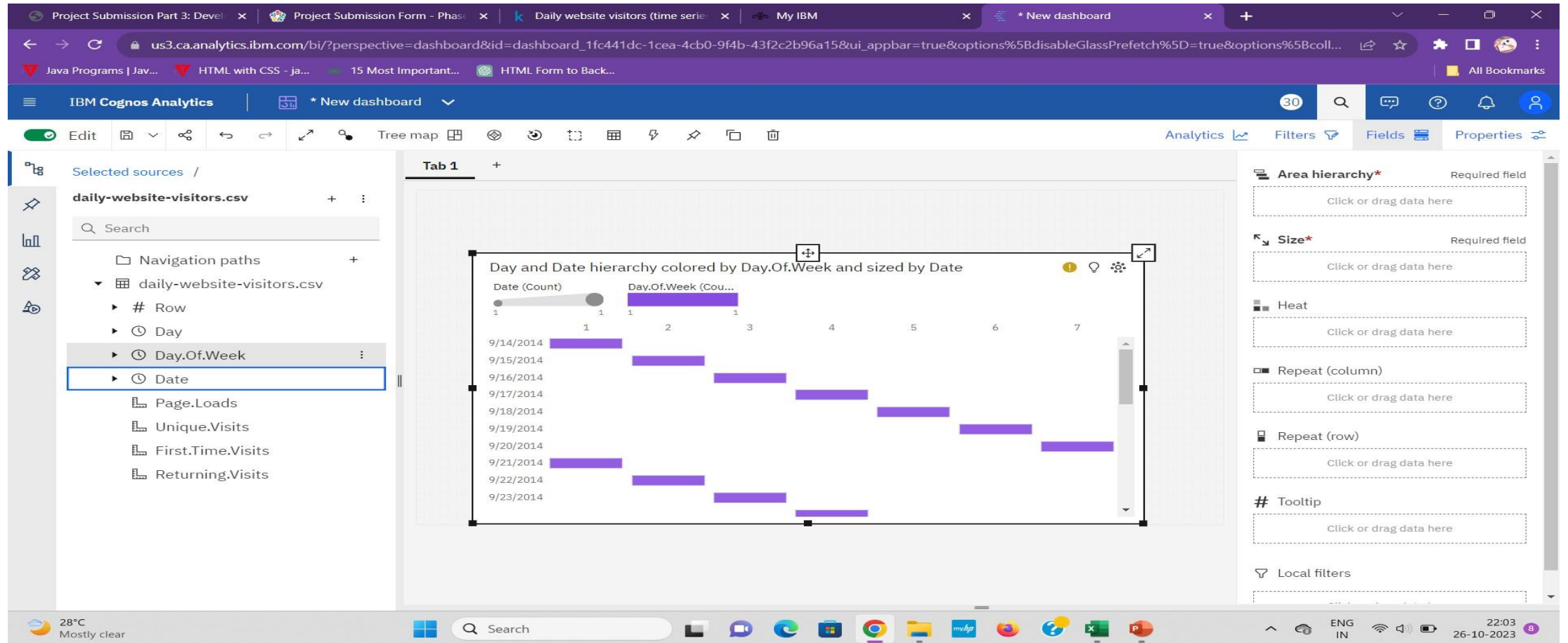
The screenshot displays the IBM Cognos Analytics web application interface. The browser's address bar shows the URL `us3.ca.analytics.ibm.com/bi/?perspective=authoring&id=1698338081707`. The application header includes the 'IBM Cognos Analytics' logo, a 'Reporting' dropdown menu, and a notification banner that reads 'What's New: To read about what's new in Reporting, click More Info.' with 'Dismiss' and 'More Info' links.

The main content area is titled 'Create a report' and includes the instruction 'Select a template and theme for your report'. Below this, there are two tabs: 'Templates' (which is active) and 'Themes'. The 'Templates' tab displays a grid of 12 report templates arranged in three rows and four columns:

- Row 1: 'Blank' (selected), 'Blank active report', '1 beside 2', and '1 beside 2 active report'.
- Row 2: '1 column', '1 column active report', '2 by 2', and '2 by 2 active report'.
- Row 3: Three templates with grid patterns (2x2, 3x2, and 3x3) and one 'active report' template with a 3x3 grid.

Each template is represented by a dashed-line icon showing its layout. The 'Blank' template is highlighted with a grey border. To the right of the template grid are 'Cancel' and 'Create' buttons. The bottom of the screen shows a Windows taskbar with the date '26-10-2023' and time '22:06'.

Creating bar graph using report



STATISTICAL TESTS USING TREEMAP

