___TOpIC – unEMpLOyMEnT RATE By AgE gROup

CODE:

```
#unemployment_rate_by_age_groups.

library(dplyr)

unemployment <-
read.csv("C:/Users/User/Downloads/unemployment_rate_by_age_groups.csv")
head(unemployment)
View(unemployment)
# what if i want to extract a specific one or two columns from the dataset
# for that we will be using the select function which is in the dplyr package

unemployment %>% select(1,2) -> unemployment1_2     # pipe operator is used to
join the dataframe and methods
View(unemployment1_2)

unemployment %>% select(3:6) -> unemployment1_2
View(unemployment1_2)


unemployment %>% select("Area.Name","Year","Age.16.19") -> unemployment1
View(unemployment1)


unemployment %>% select(starts_with("Y")) ->P
View(P)


unemployment %>% select(ends_with("e")) ->s
View(s)


# now by using the filter function we can extract the specific records
# on the basis of the conditions

unemployment %>% filter(Year=="2008") ->com
View(com)


unemployment %>% filter(Year>2008) ->mon
View(mon)
str(unemployment) # for checking the structure of the data
```

```r
unemployment %>% filter(Year=="2010" & Year>2008) -> a
View(a)


# we can use the select and the filter function in single command

unemployment %>% select("Area.Name","Year","Age.16.19") %>%
filter(Year=="2008") ->b
View(b)


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# Viewing the Data Visualization By GGPLOT2

# ggplot2 is a package which is build on the grammar of graphics

# it is divided into different layers
  # Data layer (which decides that on which layer do you want to visualize)
  # Aesthetic layer (we can map the different columns on different aesthetic
for eg x-axis, y-axis, color, shape)
  # geometry layers (we can make different types of plots for eg geom_bar,
geom_histogram)

library(ggplot2)
View(unemployment)

ggplot()
ggplot(data = unemployment)

#histogram it is basically used for understanding the distribution of the
numeric-continuous values
ggplot(data = unemployment,aes(x=Age.16.19))
ggplot(data = unemployment,aes(x=Age.16.19))+geom_histogram()
ggplot(data = unemployment,aes(x=Age.16.19))+geom_histogram(fill= "red")
ggplot(data = unemployment,aes(x=Age.16.19))+geom_histogram(fill=
"orange",col="red") # col = color


#bar-plot it is basically used for understanding the distribution of the
categorical, factors values

ggplot(data = unemployment,aes(x=Age.20.24))+geom_bar()
ggplot(data = unemployment,aes(x=Age.20.24))+geom_bar(fill= "blue")
ggplot(data = unemployment,aes(x=Age.20.24,fill= Age.20.24))+geom_bar()

#scatter-plot

ggplot(data = unemployment,aes(x=Year,y=Age.25.34))+geom_point()
ggplot(data = unemployment,aes(x=Date,y=Age.35.44,col=Year))+geom_point()
```
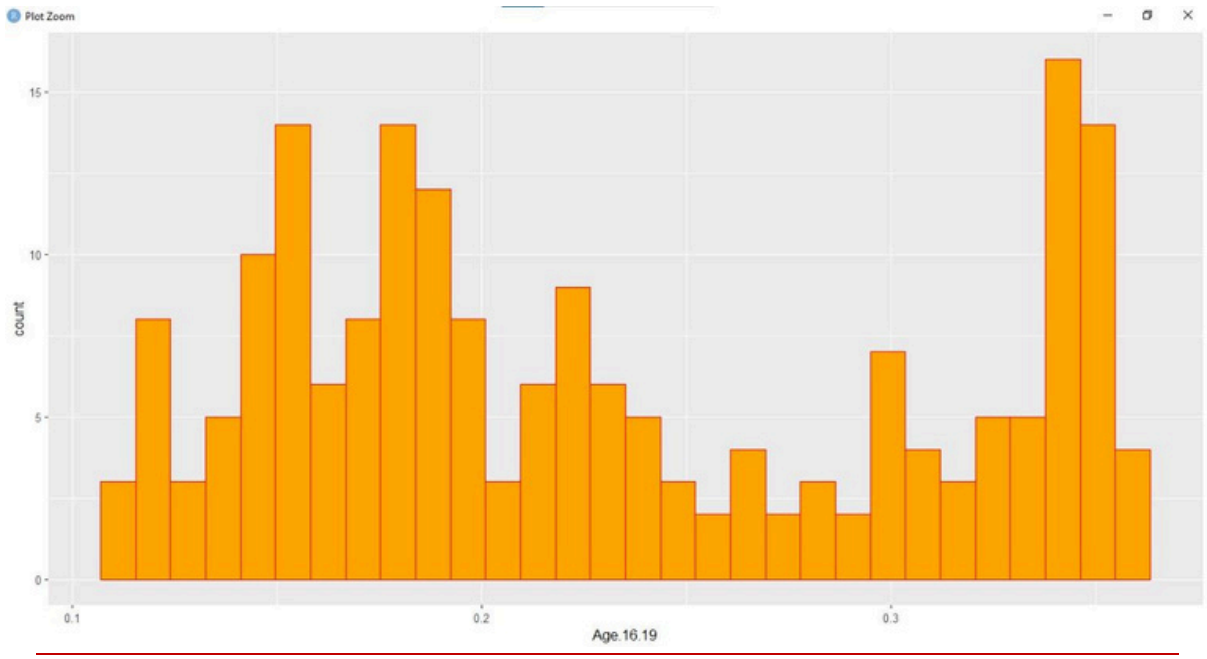
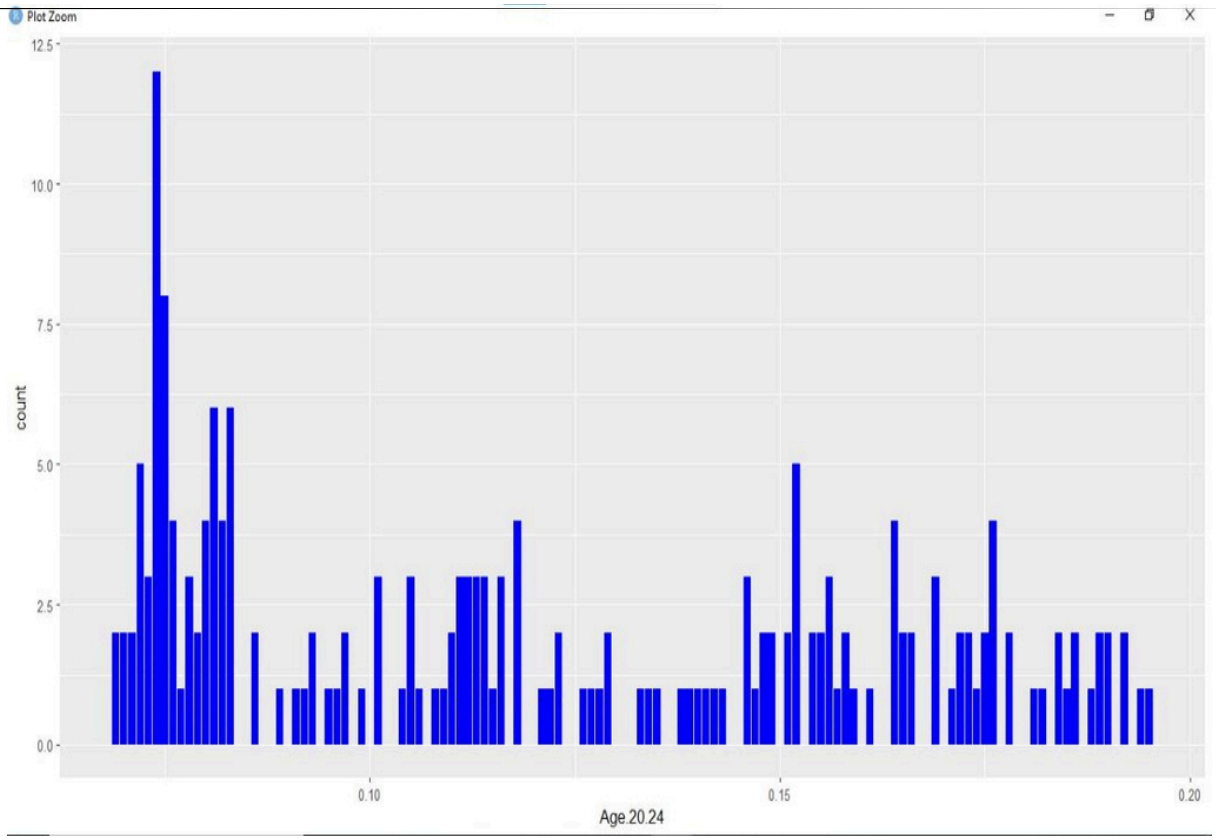
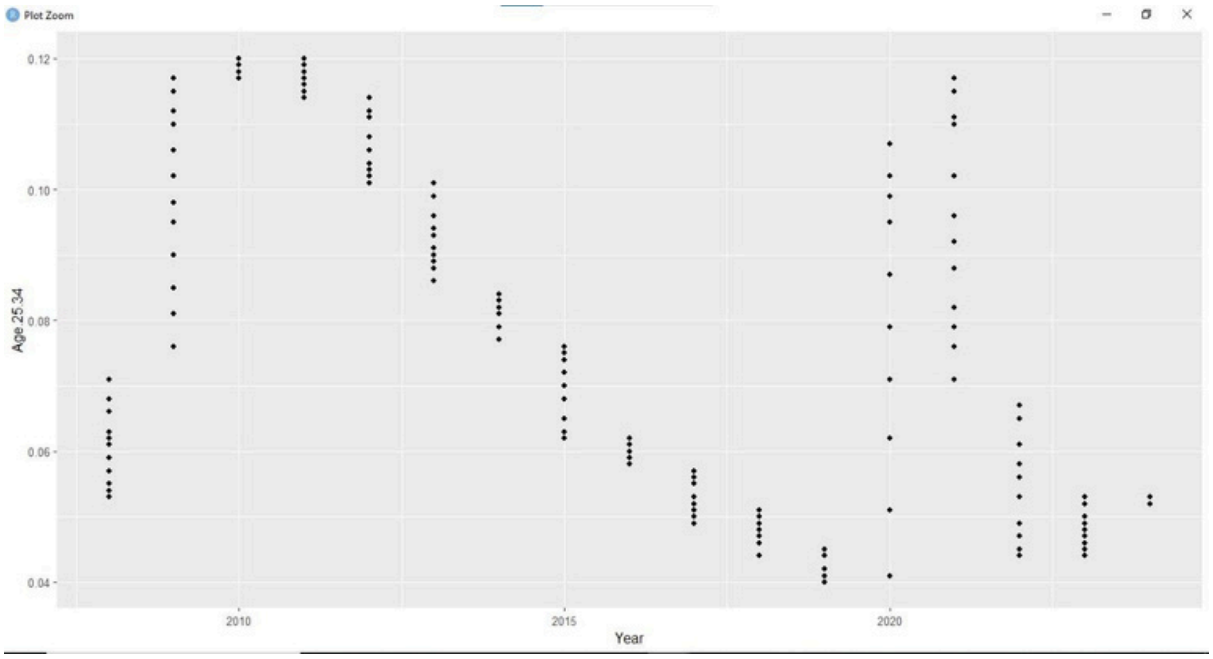
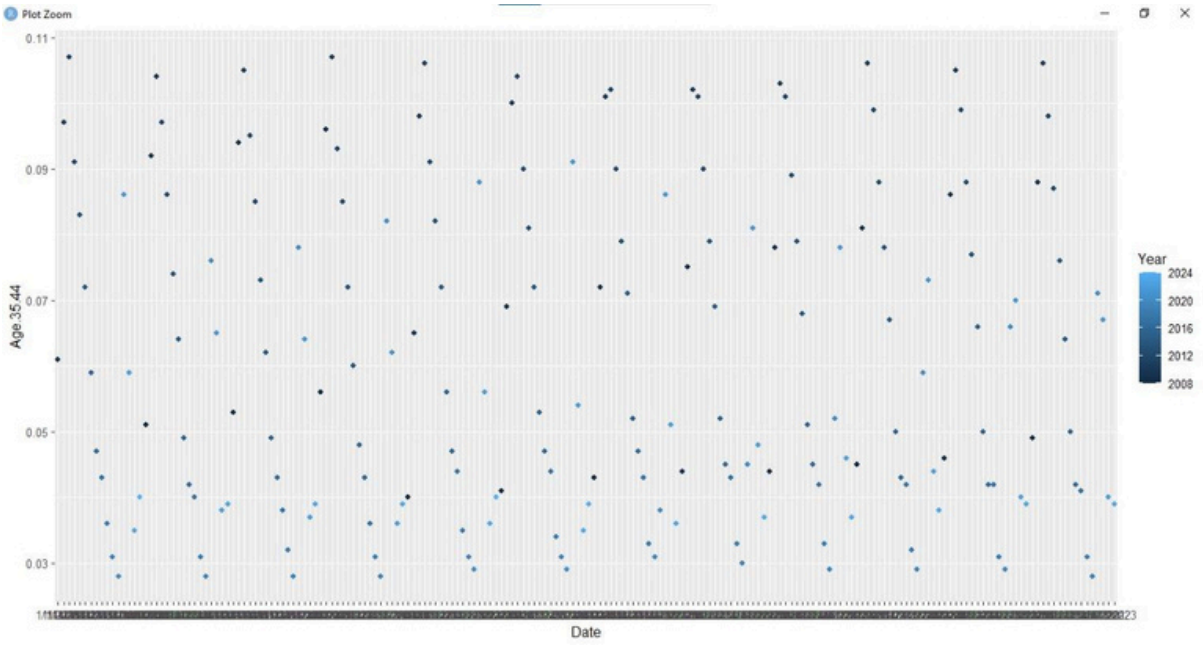

```
#box-plot it is used to understand the variation btw
#the categorical and continuous value
ggplot(data = unemployment,aes(x= Age.20.24,y=Year))+geom_boxplot()
ggplot(data = unemployment,aes(x= Year,y=Age.16.19,fill=Date))+geom_boxplot()


#faceting it is used when we are working on the complex data
#like we are plotting the different
#types of plots in the same visualization in that case we
#use the faceting it basically makes the groups.

ggplot(data =
unemployment,aes(x=Age.20.24, y=Age.16.19,f ill=Year))+geom_boxplot()+fac et_grid
(~Year)
```

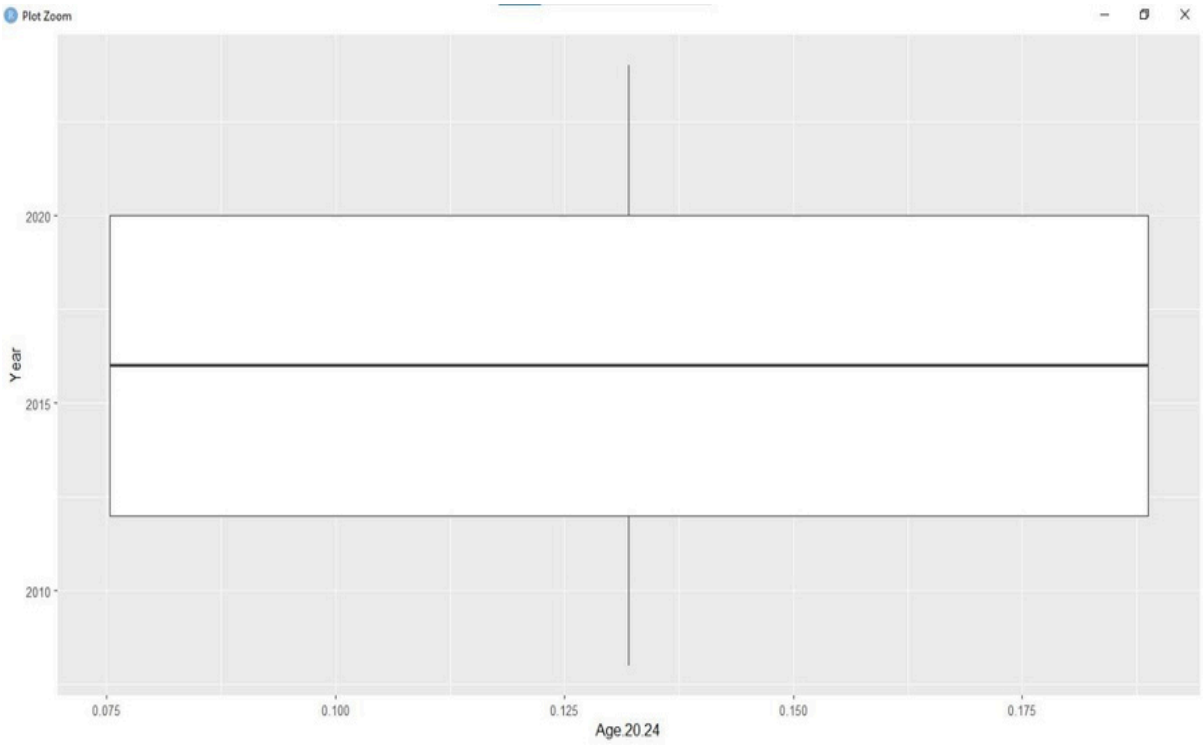
OuTpuT

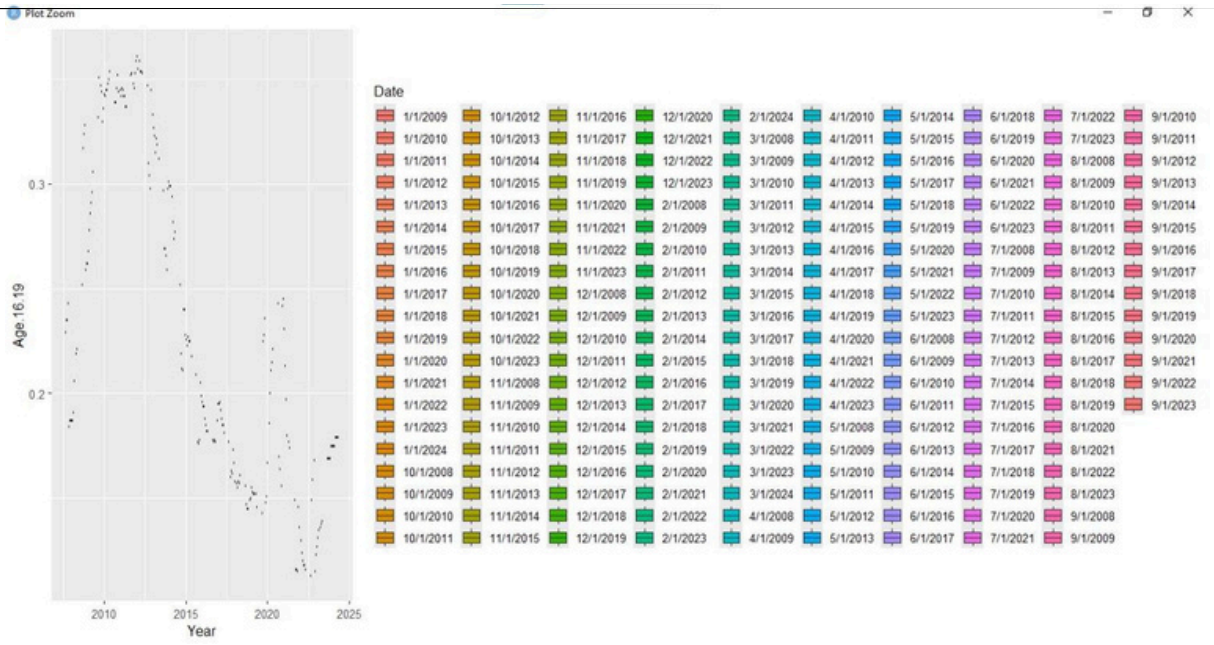



Plot Zoom
12.5
10.0
7.5
5.0
2.5
0.0
count
0.10
0.15
0.20
Age.20.24


Plot Zoom
0.12
0.10
0.08
0.06
0.04
Age.25.34
2010
2015
2020
Year


Plot Zoom
0.11
0.09
0.07
0.05
0.03
Age.35.44
Year
2024
2020
2016
2012
2008
Date


Plot Zoom
2020
2015
2010
Year
0.075
0.100
0.125
0.150
0.175
Age.20.24


Plot Zoom
Age.16.19
0.3
0.2
2010
2015
2020
2025
Year
Date
1/1/2009 10/1/2012 11/1/2016 12/1/2020 2/1/2024 4/1/2010 5/1/2014 6/1/2018 7/1/2022 9/1/2010
1/1/2010 10/1/2013 11/1/2017 12/1/2021 3/1/2008 4/1/2011 5/1/2015 6/1/2019 7/1/2023 9/1/2011
1/1/2011 10/1/2014 11/1/2018 12/1/2022 3/1/2009 4/1/2012 5/1/2016 6/1/2020 8/1/2008 9/1/2012
1/1/2012 10/1/2015 11/1/2019 12/1/2023 3/1/2010 4/1/2013 5/1/2017 6/1/2021 8/1/2009 9/1/2013
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1/1/2014 10/1/2017 11/1/2021 2/1/2009 3/1/2012 4/1/2015 5/1/2019 6/1/2023 8/1/2011 9/1/2015
1/1/2015 10/1/2018 11/1/2022 2/1/2010 3/1/2013 4/1/2016 5/1/2020 7/1/2008 8/1/2012 9/1/2016
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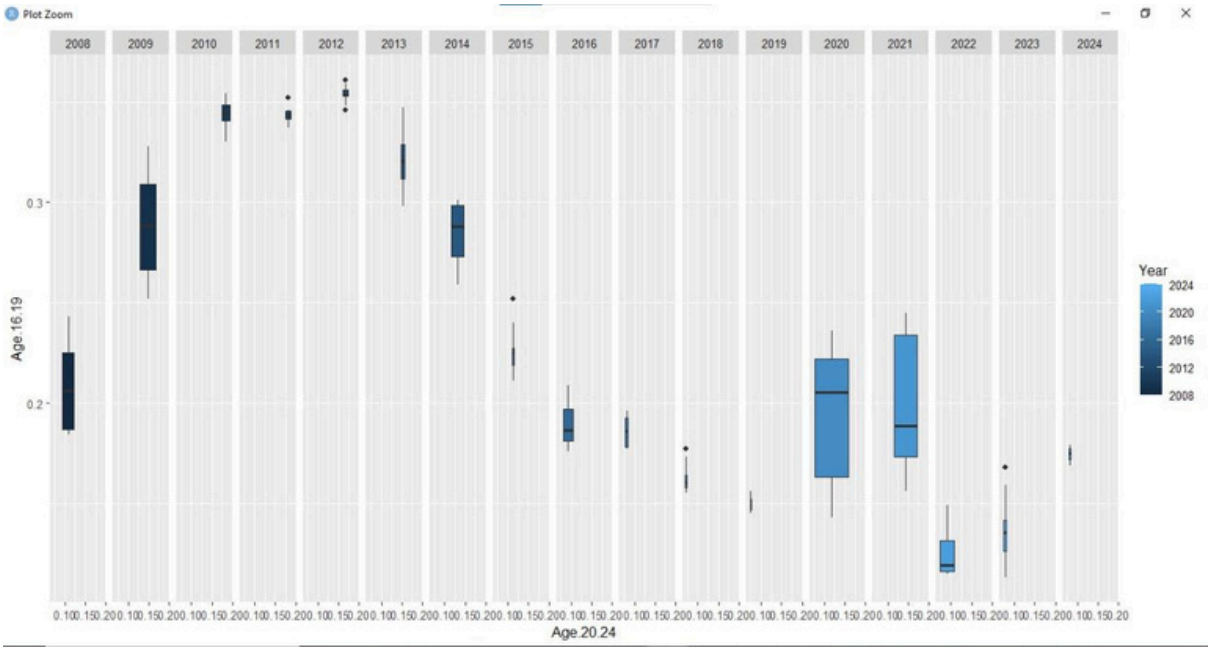
1/1/2018 10/1/2021 12/1/2009 2/1/2013 3/1/2016 4/1/2019 5/1/2023 7/1/2011 8/1/2015 9/1/2019
1/1/2019 10/1/2022 12/1/2010 2/1/2014 3/1/2017 4/1/2020 6/1/2008 7/1/2012 8/1/2016 9/1/2020
1/1/2020 10/1/2023 12/1/2011 2/1/2015 3/1/2018 4/1/2021 6/1/2009 7/1/2013 8/1/2017 9/1/2021
1/1/2021 11/1/2008 12/1/2012 2/1/2016 3/1/2019 4/1/2022 6/1/2010 7/1/2014 8/1/2018 9/1/2022
1/1/2022 11/1/2009 12/1/2013 2/1/2017 3/1/2020 4/1/2023 6/1/2011 7/1/2015 8/1/2019 9/1/2023
1/1/2023 11/1/2010 12/1/2014 2/1/2018 3/1/2021 5/1/2008 6/1/2012 7/1/2016 8/1/2020
1/1/2024 11/1/2011 12/1/2015 2/1/2019 3/1/2022 5/1/2009 6/1/2013 7/1/2017 8/1/2021
10/1/2008 11/1/2012 12/1/2016 2/1/2020 3/1/2023 5/1/2010 6/1/2014 7/1/2018 8/1/2022
10/1/2009 11/1/2013 12/1/2017 2/1/2021 3/1/2024 5/1/2011 6/1/2015 7/1/2019 8/1/2023
10/1/2010 11/1/2014 12/1/2018 2/1/2022 4/1/2008 5/1/2012 6/1/2016 7/1/2020 9/1/2008
10/1/2011 11/1/2015 12/1/2019 2/1/2023 4/1/2009 5/1/2013 6/1/2017 7/1/2021 9/1/2009


Plot Zoom
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024
Age.16.19
0.3
0.2
Year
2024
2020
2016
2012
2008
Age.20.24

R Data Visualization Project Report: Exploring Unemployment [unemployment_rate_by_age_groups]

Introduction:

~~This project aim~~ed to explore unemplyment patterns within the [unemployment_rate_by_age_groups] using R data visualization techniques. The dataset, obtained from kaggle, contains information on unemployment_rate_by_age_groups . The data was loaded into R using the read.csv function The dplyr package was used to manipulate the data for further analysis.

Visualization

1) This chart investigated unemployment rate by age groups.
2) The x-axis represents count and the y-axis represents age.
3) We can observe unemployment rate by different age group.
4) The visualisation contain different charts

- Histogram
- Baragraph
- Scatter plot
- Box plot

Conclusion:

This R data visualization project successfully explored unemployment within the [unemployment_rate_by_age_groups]. The created visualizations revealed unemployment rate by age groups the people those are unemployed within the different age group and with the changing time peoples who are unemployed during different month. These insights can be valuable for checking unemolyment rate by different age group.