

q8

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```
library(readxl)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##   filter, lag
```

```
## The following objects are masked from 'package:base':
##
## intersect, setdiff, setequal, union
```

```
library(ggplot2)
library(reshape2)
library(tidyr)
```

```
##
## Attaching package: 'tidyr'
```

```
## The following object is masked from 'package:reshape2':
##
## smiths
```

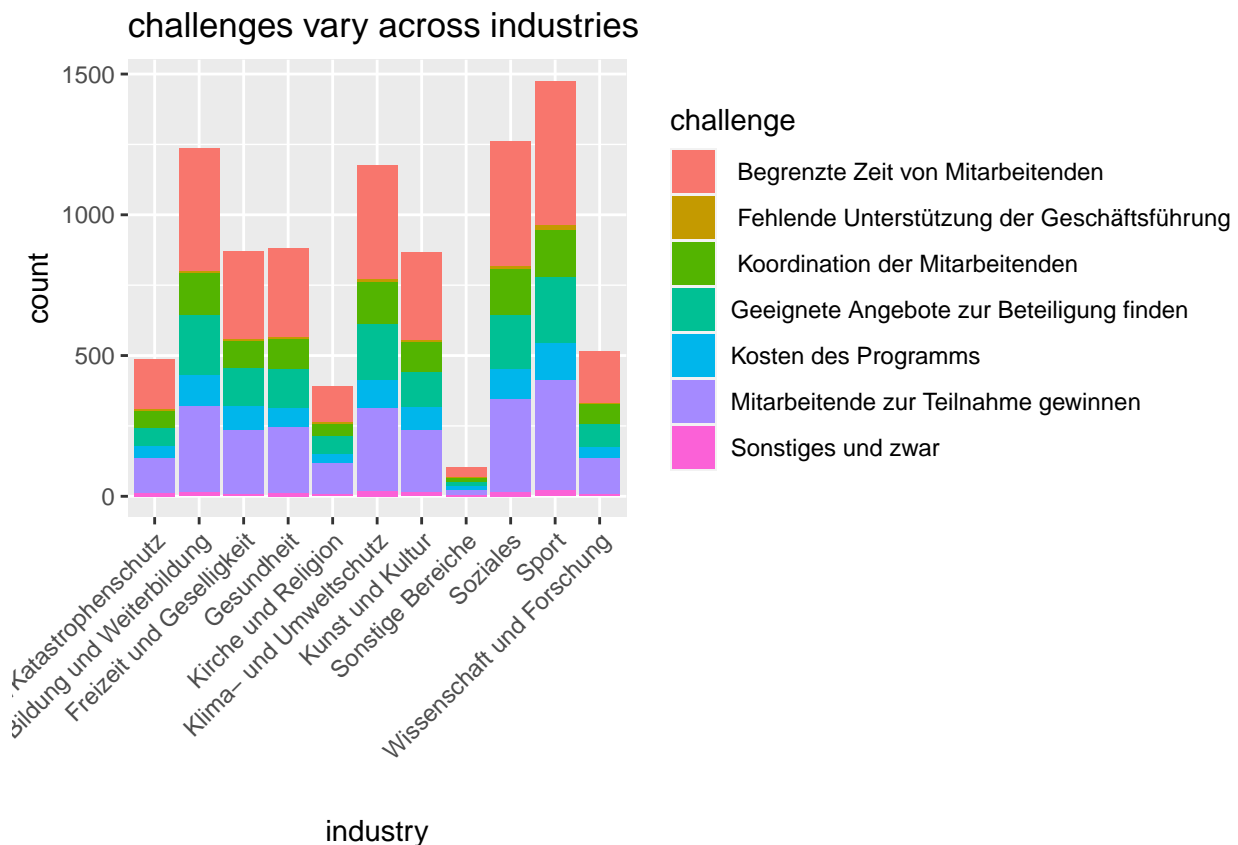
*#This graphic shows the different challenges they encounter in different industries.*

```
data<-read_excel("MUE.2022.for.LMU.xlsx")
df1 <- data %>% select(SERIAL,D001_01,D001_02,D001_03,D001_04,D001_05,D001_06,D001_07,D001_08,D001_09,D
df2 <-data %>% select(SERIAL, E004_01,E004_02,E004_03,E004_04,E004_05,E004_06,E004_07) #Extract the cha
df_industry_long <- pivot_longer(df1,cols = -SERIAL,names_to = "industry", values_to = "element")
df_challenges_long <- pivot_longer(df2,cols = -SERIAL,names_to = "challenge", values_to = "element") #
df_industry_long <- na.omit(df_industry_long) #Remove all na values
df_challenges_long <- na.omit(df_challenges_long)
df_challenges_long #this is result
```

```
## # A tibble: 11,298 x 3
##   SERIAL challenge element
##   <chr> <chr>      <lgl>
## 1 LEUPX E004_01    FALSE
```

```
## 2 LEUPX E004_02 FALSE
## 3 LEUPX E004_03 FALSE
## 4 LEUPX E004_04 FALSE
## 5 LEUPX E004_05 FALSE
## 6 LEUPX E004_06 FALSE
## 7 LEUPX E004_07 TRUE
## 8 PTMYN E004_01 FALSE
## 9 PTMYN E004_02 TRUE
## 10 PTMYN E004_03 FALSE
## # i 11,288 more rows
```

```
df_industry_long <- df_industry_long[df_industry_long$element == TRUE,]
#delete all the Delete all false values we just need the true element.
df_challenges_long <- df_challenges_long[df_challenges_long$element ==TRUE,]
merged_df <- merge(df_industry_long, df_challenges_long, by ="SERIAL")
#Combine the two tables key:serial column
#The next lines of code modify their column names
replacement_map <- c("D001_01"="Kunst und Kultur", "D001_02"="Sport", "D001_03"="Freizeit und Geselligk
                    "D001_07"="Soziales", "D001_08"="Bevölkerungs-/Katastrophenschutz", "D001_09"="Klima- und U
replace2 <- c("E004_01"="Geeignete Angebote zur Beteiligung finden","E004_02"="Mitarbeitende zur Teilna
merged_df$industry <- replacement_map[merged_df$industry]
merged_df$challenge <- replace2[merged_df$challenge]
ggplot(merged_df)+
  geom_bar(mapping = aes(x=industry, fill=challenge))+
  theme(axis.text.x = element_text(angle = 45, hjust = 1))+
  ggtitle("challenges vary across industries")
```



## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

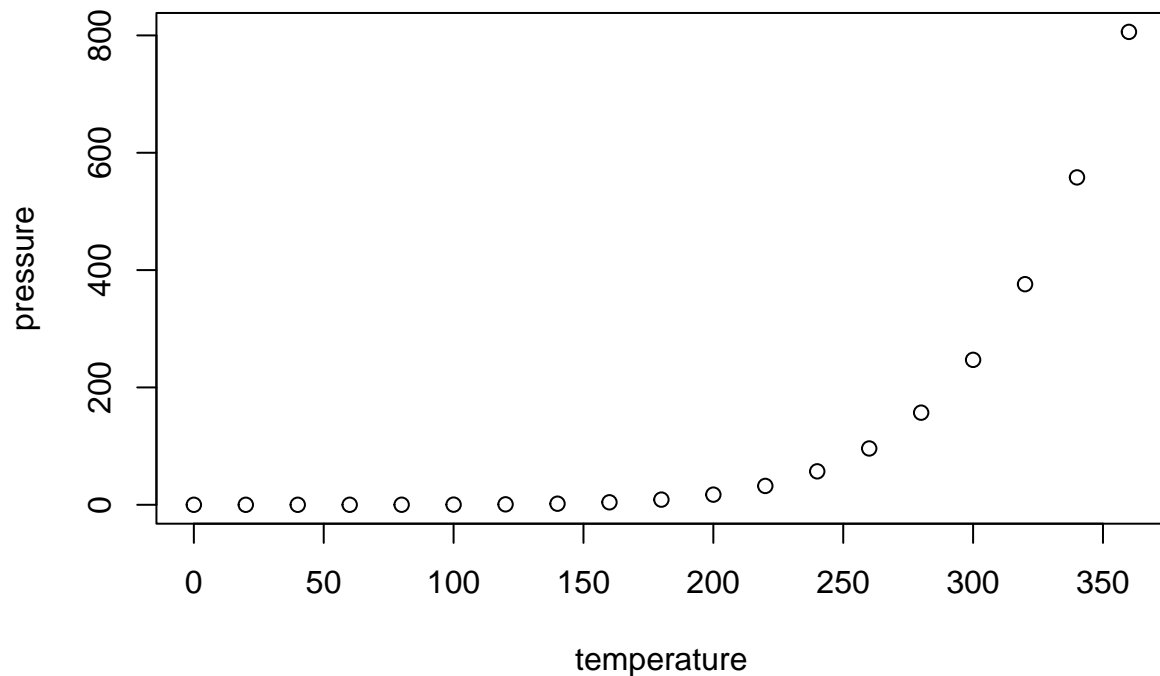
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed      dist
##  Min.   : 4.0    Min.    : 2.00
##  1st Qu.:12.0    1st Qu.: 26.00
##  Median :15.0    Median : 36.00
##  Mean   :15.4    Mean     : 42.98
##  3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.     :120.00
```

## Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.