Hantz_Angrand_Acquisition_Project_Proposal

Hantz Angrand

November 11, 2018

1.-Problem

Recently Kaggle has tried to get the pulse of data science around the world through a survey. The results of the survey is available to everybody that participated in the survey. Kaggle also encourages its community to deep dive into the data in order to discover about the many communities comprised in the survey.

In this perspective I want to discover how the involvement of minorities group in data science. We want specifically explore the priorities,concerns and the tools they use and the difficulties they face in the domain of data science.

For this research, we will group similar countries that are almost the same characteristic. We choose african countrie and some South America countries where by first impression they are not considered a major player in the domain of data science.

Then compare to the size of this group in the general population do they get involved in data science as the same percentage or are their revenues compare to other group in the survey. Also determine what are the priorities or concerns of this group in data science perspective.

2.-Data

Kaggle conducts an industry wide survey that wants to understand the state of data science and machine learning. The survey was live in October and more than 20000 people participate in the survey. The results include who are working with data, what is happening with machine learning in different industries and the best ways for new data scientist to break into the field.

The data can be found here. https://www.kaggle.com/kaggle/kaggle-survey-2018 or via API kaggle datasets download -d kaggle/kaggle-survey-2018

Loading libraries

```
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------------------------
## v ggplot2 3.1.0      v purrr   0.2.5
## v tibble  1.4.2      v dplyr   0.7.6
## v tidyr   0.8.1      v stringr 1.3.1
## v readr   1.1.1      v forcats 0.3.0
## -- Conflicts -----------------------------------------------------------------
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(dplyr)
```

```
#Load the data
srv_18<-read.csv("C:/Users/hangr/Documents/Acquisition and data management/FinalProject/multipleChoiceR
head(srv_18)
```

```
##   Duration..in.seconds. What.is.your.gender....Selected.Choice
## 1                   710                                 Female
## 2                   434                                   Male
## 3                   718                                 Female
## 4                   621                                   Male
## 5                   731                                   Male
## 6                  1142                                   Male
##   What.is.your.gender....Prefer.to.self.describe...Text
## 1                                                    -1
## 2                                                    -1
## 3                                                    -1
## 4                                                    -1
## 5                                                    -1
## 6                                                    -1
##   What.is.your.age....years.. In.which.country.do.you.currently.reside.
## 1                       45-49                  United States of America
## 2                       30-34                                  Indonesia
## 3                       30-34                  United States of America
## 4                       35-39                  United States of America
## 5                       22-24                                      India
## 6                       25-29                                   Colombia
##   What.is.the.highest.level.of.formal.education.that.you.have.attained.or.plan.to.attain.within.the.n
## 1                                                                                                   Do
## 2                                                                                               Bachel
## 3                                                                                                 Mast
## 4                                                                                                 Mast
## 5                                                                                                 Mast
## 6                                                                                               Bachel
##   Which.best.describes.your.undergraduate.major....Selected.Choice
## 1                                                             Other
## 2                                  Engineering (non-computer focused)
## 3                            Computer science (software engineering, etc.)
## 4          Social sciences (anthropology, psychology, sociology, etc.)
## 5                                            Mathematics or statistics
## 6                                              Physics or astronomy
##   Select.the.title.most.similar.to.your.current.role..or.most.recent.title.if.retired.....Selected.Ch
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## 6                                                                                           Computer
##    In.what.industry.is.your.current.employer.contract..or.your.most.recent.employer.if.retired.....Otl
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## 6
##    How.many.years.of.experience.do.you.have.in.your.current.role.
## 1
## 2                                                                   5-10
## 3                                                                    0-1
## 4
## 5                                                                    0-1
## 6                                                                    0-1
##    What.is.your.current.yearly.compensation..approximate..USD..
## 1
## 2                                                               10-20,000
## 3                                                                0-10,000
## 4
## 5                                                                0-10,000
## 6 I do not wish to disclose my approximate yearly compensation
##    Does.your.current.employer.incorporate.machine.learning.methods.into.their.business.
## 1                                                                         I do not know
## 2                                                             No (we do not use ML methods)
## 3                                                                         I do not know
## 4
## 5                                                                         I do not know
## 6           We are exploring ML methods (and may one day put a model into production)
##    Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
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##    Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
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##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
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##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1                                         Cloud-based data software & APIs (AWS, G(
## 2                                   Basic statistical software (Microsoft Excel, Googl
## 3                              Local or hosted development environments (RStudio, Ju
## 4                              Local or hosted development environments (RStudio, Ju
## 5                                         Advanced statistical software (S
## 6                              Local or hosted development environments (RStudio, Ju
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
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##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
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##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
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##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
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##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
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##    Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.years
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##    What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##    What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##    What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Other...Text
## 1                                                                                                   -1
## 2                                                                                                   -1
## 3                                                                                                   -1
## 4                                                                                                   -1
## 5                                                                                                   -1
## 6                                                                                                   -1
##    What.specific.programming.language.do.you.use.most.often....Selected.Choice
## 1
## 2
## 3                                                                         Java
## 4                                                                       Python
## 5                                                                          SQL
## 6                                                          Javascript/Typescript
##    What.specific.programming.language.do.you.use.most.often....Other...Text
## 1                                                                        -1
## 2                                                                        -1
## 3                                                                        -1
## 4                                                                        -1
## 5                                                                        -1
## 6                                                                        -1
##    What.programming.language.would.you.recommend.an.aspiring.data.scientist.to.learn.first....Selecte
## 1
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12

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## 6
##   What.programming.language.would.you.recommend.an.aspiring.data.scientist.to.learn.first....Other..
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##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Other
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## 2
## 3
## 4
## 5
## 6
##   Of.the.choices.that.you.selected.in.the.previous.question..which.ML.library.have.you.used.the.most
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## 2
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## 5
## 6
##   Of.the.choices.that.you.selected.in.the.previous.question..which.ML.library.have.you.used.the.most
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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##   Of.the.choices.that.you.selected.in.the.previous.question..which.specific.data.visualization.libra
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##   Of.the.choices.that.you.selected.in.the.previous.question..which.specific.data.visualization.libra
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```
## 3
## 4
## 5
## 6
##   Approximately.what.percent.of.your.time.at.work.or.school.is.spent.actively.coding.
## 1                                                             0% of my time
## 2                                                      1% to 25% of my time
## 3                                                    75% to 99% of my time
## 4                                                    50% to 74% of my time
## 5                                                    75% to 99% of my time
## 6                                                    50% to 74% of my time
##   How.long.have.you.been.writing.code.to.analyze.data.
## 1          I have never written code but I want to learn
## 2          I have never written code but I want to learn
## 3                                            5-10 years
## 4                                            5-10 years
## 5                                            5-10 years
## 6                                             3-5 years
##   For.how.many.years.have.you.used.machine.learning.methods..at.work.or.in.school..
## 1              I have never studied machine learning but plan to learn in the future
## 2              I have never studied machine learning but plan to learn in the future
## 3                                                                          < 1 year
## 4                                                                         4-5 years
## 5                                                                         2-3 years
## 6                                                                          < 1 year
##   Do.you.consider.yourself.to.be.a.data.scientist.
## 1                                            Maybe
## 2                                   Definitely not
## 3                                   Definitely yes
## 4                                     Probably yes
## 5                                            Maybe
## 6                                            Maybe
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
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## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
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##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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##   Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
## 1
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
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## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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## 3
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## 4                                                                                              
## 5                                                                                              
## 6                                                                                              
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1                                                                                              
## 2                                                                                              
## 3                                                                                              
## 4                                                                                              
## 5                                                                                              
## 6                                                                                              
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1                                                                                              
## 2                                                                                              
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## 5                                                                                              
## 6                                                                                              
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1                                                                                              
## 2                                                                                              
## 3                                                                                              
## 4                                                                                              
## 5                                                                                              
## 6                                                                                              
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1                                                                                              
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## 4                                                                                              
## 5                                                                                              
## 6                                                                                              
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1                                                                                              
## 2                                                                                              
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## 5                                                                                              
## 6                                                                                              
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1                                                                                              
## 2                                                                                              
## 3                                                                                              
## 4                                                                                              
## 5                                                                                              
## 6                                                                                              
##   What.is.the.type.of.data.that.you.currently.interact.with.most.often.at.work.or.school.....Selected
## 1                                                                                              
## 2                                                                                              
## 3                                                                                    Time Serie
## 4                                                                                       Numerica
## 5                                                                                              
## 6                                                                                          Imag
##   What.is.the.type.of.data.that.you.currently.interact.with.most.often.at.work.or.school.....Other.Da
## 1                                                                                              
```

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## 2
## 3
## 4
## 5
## 6
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Government.websites
## 1
## 2
## 3                                                                                   Government websites
## 4                                                                                   Government websites
## 5
## 6                                                                                   Government websites
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...University.research
## 1
## 2
## 3
## 4
## 5
## 6                                                                                   University research
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Non.profit.research
## 1
## 2
## 3
## 4
## 5
## 6                                                                                   Non-profit research
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Dataset.aggregator.p
## 1
## 2
## 3                                                                                   Dataset aggregator/p
## 4                                                                                   Dataset aggregator/p
## 5
## 6                                                                                   Dataset aggregator/p
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...I.collect.my.own.dat
## 1
## 2
## 3
## 4                                                                                   I collect my own dat
## 5
## 6                                                                                   I collect my own dat
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Publicly.released.da
## 1
## 2
## 3
## 4
## 5                                                                                   Publicly released da
## 6                                                                                   Publicly released da
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Google.Search
## 1
## 2
## 3
## 4
## 5
## 6                                                                                   Google Search
```

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```
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Google.Dataset.Sear
## 1
## 2
## 3
## 4
## 5
## 6                                                                          Google Dataset Sear
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...GitHub
## 1
## 2
## 3                                                                          GitHub
## 4
## 5
## 6                                                                          GitHub
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...None.I.do.not.work.
## 1
## 2
## 3
## 4
## 5
## 6
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Other
## 1
## 2
## 3
## 4
## 5
## 6
##   Where.do.you.find.public.datasets...Select.all.that.apply....Other...Text
## 1                                                                  -1
## 2                                                                  -1
## 3                                                                  -1
## 4                                                                  -1
## 5                                                                  -1
## 6                                                                  -1
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.tim
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.tim
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.tim
## 1
## 2
## 3
## 4
```

```
## 5
## 6
##    During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##    During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##    During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##    During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##    What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##    What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##    What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
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## 4
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## 6
##    What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
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## 3
## 4
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## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
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## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
```

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## 1
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## 4
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## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
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## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
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## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
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## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
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## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
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## 4
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## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
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## 3
## 4
## 5
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```
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platform.have.you.spent.the.most.amount.of.time....Selected.Choice
## 1
## 2
## 3                                                                           DataCamp
## 4                                                                           Coursera
## 5                                                                           Coursera
## 6                                                                       Kaggle Learn
##   On.which.online.platform.have.you.spent.the.most.amount.of.time....Other...Text
## 1                                                                             -1
## 2                                                                             -1
## 3                                                                             -1
## 4                                                                             -1
## 5                                                                             -1
## 6                                                                             -1
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 4
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
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## 4
## 5
## 6
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##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
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## 4
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## 6
##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
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## 4
## 5
## 6
##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 2
## 3
## 4
## 5
## 6
##    Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    How.do.you.perceive.the.quality.of.online.learning.platforms.and.in.person.bootcamps.as.compared.t
## 1
## 2
## 3
## 4
## 5
## 6
##    How.do.you.perceive.the.quality.of.online.learning.platforms.and.in.person.bootcamps.as.compared.t
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.better.demonstrates.expertise.in.data.science..academic.achievements.or.independent.projects
## 1                              Independent projects are equally important as academi
## 2                              Independent projects are equally important as academi
## 3                              Independent projects are equally important as academi
## 4                        Independent projects are much more important than academi
## 5                      Independent projects are slightly more important than academi
## 6                      Independent projects are slightly less important than academi
##    How.do.you.perceive.the.importance.of.the.following.topics....Fairness.and.bias.in.ML.algorithms.
## 1
## 2
## 3                                                              Very important
## 4                                                              Very important
```

44

```
## 5                                                                 Not at all important
## 6                                                                      Very important
##    How.do.you.perceive.the.importance.of.the.following.topics....Being.able.to.explain.ML.model.output
## 1
## 2
## 3
## 4
## 5
## 6
##    How.do.you.perceive.the.importance.of.the.following.topics....Reproducibility.in.data.science
## 1
## 2
## 3                                                                                  Very important
## 4                                                                                  Very important
## 5                                                                                  Very important
## 6                                                                                  Very important
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
## 1
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## 3
## 4
## 5
## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
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## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
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##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
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## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
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## 4
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## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
## 1
## 2
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```
## 3
## 4
## 5
## 6
##   Approximately.what.percent.of.your.data.projects.involved.exploring.unfair.bias.in.the.dataset.and
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
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## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
```

```
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
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## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
## 2
## 3
## 4
## 5
## 6
##   Approximately.what.percent.of.your.data.projects.involve.exploring.model.insights.
## 1
## 2
## 3                                                                                10-20
## 4                                                                                20-30
## 5                                                                                20-30
## 6                                                                                    0
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
## 2
## 3
## 4
## 5
```

47

```
## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
## 2
## 3
## 4
## 5
## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
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## 4
## 5
## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 4
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## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
## 2
## 3
## 4
## 5
## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 2
## 3
```

```
##  4
##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
##  2
##  3
##  4
##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
##  2
##  3
##  4
##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
##  2
##  3
##  4
##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
##  2
##  3
##  4
##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
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##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
##  2
##  3
##  4
##  5
##  6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
##  1
##  2
##  3
##  4
##  5
##  6
##    Do.you.consider.ML.models.to.be..black.boxes..with.outputs.that.are.difficult.or.impossible.to.expl
##  1
```

```
## 2
## 3                               I am confident that I can explain the outputs of most if not all ML mo
## 4                                               Yes, most ML models are "black b
## 5            I am confident that I can understand and explain the outputs of many but not all ML mo
## 6   I view ML models as "black boxes" but I am confident that experts are able to explain model ou
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....So
## 1
## 2
## 3
## 4
## 5
## 6
```

```
##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
## 1
## 2
## 3
## 4
## 5
## 6
##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
## 1
## 2
## 3
## 4
## 5
## 6
##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
## 1
## 2
## 3
## 4
## 5
## 6
##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
## 1
## 2
## 3
## 4
## 5
## 6
##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
## 1
## 2
## 3
## 4
## 5
## 6
##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Ot
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
```

```
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
## 1
## 2
## 3
## 4
## 5
## 6
```

Build our dataset from the survey

In our analysis we want to understand the state of data science in minority communities. To do so we will choose 5-7 countries that can be classified as minorities in the data science world like Nigeria, Colombia, Kenya,Indonesia,South Africa, Malaysia, Tunisia. In our dataset we will fliter by those countries and bind them together to form a new dataset.

```r
#Nigeria
colombia<-filter(srv_18, In.which.country.do.you.currently.reside.=='Colombia') %>%
  rename("Country"=In.which.country.do.you.currently.reside.)

#Columbia
nigeria<-filter(srv_18, In.which.country.do.you.currently.reside.=="Nigeria") %>%
  rename("Country"=In.which.country.do.you.currently.reside.)

#Kenya
kenya<-filter(srv_18, In.which.country.do.you.currently.reside.=="Kenya") %>%
  rename("Country"=In.which.country.do.you.currently.reside.)

#Indonesia
indonesia<-filter(srv_18, In.which.country.do.you.currently.reside.=="Indonesia") %>%
  rename("Country"=In.which.country.do.you.currently.reside.)

#South Africa
southafrica<-filter(srv_18, In.which.country.do.you.currently.reside.=="South Africa") %>%
  rename("Country"=In.which.country.do.you.currently.reside.)
#Malaysia
malaysia<-filter(srv_18, In.which.country.do.you.currently.reside.=="Malaysia") %>%
  rename("Country"=In.which.country.do.you.currently.reside.)
#Tunisia
#tunisia<- filter(srv_18, In.which.country.do.you.currently.reside.=="Tunisia") %>%
  #rename("Country"=In.which.country.do.you.currently.reside)

min_country<-rbind(colombia,nigeria,kenya,indonesia,southafrica,malaysia)
head(min_country)
```

```
##   Duration..in.seconds. What.is.your.gender....Selected.Choice
## 1                  1142                                   Male
## 2                  2626                                   Male
## 3                  1500                                   Male
## 4                   924                                   Male
## 5                  1412                                   Male
## 6                  1172                                   Male
##   What.is.your.gender....Prefer.to.self.describe...Text
## 1                                                    -1
## 2                                                    -1
## 3                                                    -1
## 4                                                    -1
## 5                                                    -1
## 6                                                    -1
##   What.is.your.age....years..  Country
## 1                       25-29 Colombia
## 2                       40-44 Colombia
## 3                       25-29 Colombia
## 4                       60-69 Colombia
```

```
## 5                            22-24 Colombia
## 6                            25-29 Colombia
##   What.is.the.highest.level.of.formal.education.that.you.have.attained.or.plan.to.attain.within.the.n
## 1                                                                                           Bachel
## 2                                                                                            Mast
## 3                                                                                            Mast
## 4                                                                                            Mast
## 5                                                                                           Bachel
## 6                                                                                            Mast
##   Which.best.describes.your.undergraduate.major....Selected.Choice
## 1                                       Physics or astronomy
## 2                              Environmental science or geology
## 3                                    Mathematics or statistics
## 4      Medical or life sciences (biology, chemistry, medicine, etc.)
## 5        A business discipline (accounting, economics, finance, etc.)
## 6                      Computer science (software engineering, etc.)
##   Select.the.title.most.similar.to.your.current.role..or.most.recent.title.if.retired.....Selected.Cl
## 1                                                                                        Data Scien
## 2                                                                                        Data Scien
## 3                                                                                         Data Ana
## 4                                                                                        Data Scien
## 5                                                                                        Data Scien
## 6                                                                                     Software Eng
##   Select.the.title.most.similar.to.your.current.role..or.most.recent.title.if.retired.....Other...Te
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.industry.is.your.current.employer.contract..or.your.most.recent.employer.if.retired.....Se
## 1                                                                                          Compute
## 2                                                                                                I
## 3                                                                                          Accou
## 4                                                                                                I
## 5                                                                                                I
## 6                                                                                          Compute
##   In.what.industry.is.your.current.employer.contract..or.your.most.recent.employer.if.retired.....Ot
## 1
## 2
## 3
## 4
## 5
## 6
##   How.many.years.of.experience.do.you.have.in.your.current.role.
## 1                                       0-1
## 2                                       1-2
## 3                                       4-5
## 4                                       5-10
## 5                                       1-2
## 6                                       3-4
##   What.is.your.current.yearly.compensation..approximate..USD..
## 1 I do not wish to disclose my approximate yearly compensation
## 2                                              50-60,000
```

```
## 3                                                                  20-30,000
## 4                                                                  30-40,000
## 5                                                                  20-30,000
## 6                                                                   0-10,000
##         Does.your.current.employer.incorporate.machine.learning.methods.into.their.business.
## 1                     We are exploring ML methods (and may one day put a model into production)
## 2                     We are exploring ML methods (and may one day put a model into production)
## 3                                                                                  I do not know
## 4 We use ML methods for generating insights (but do not put working models into production)
## 5 We use ML methods for generating insights (but do not put working models into production)
## 6                                                                      No (we do not use ML methods)
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
```

```
## 1
## 2
## 3
## 4
## 5
## 6
##   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.apply.
## 1
## 2
## 3
## 4
## 5
## 6
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1                                             Local or hosted development environments (RStudio, Ju
## 2                                             Local or hosted development environments (RStudio, Ju
## 3
## 4
## 5                                             Local or hosted development environments (RStudio, Ju
## 6                                                Basic statistical software (Microsoft Excel, Googl
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1
## 2
## 3
## 4
## 5
## 6
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1
## 2
## 3
## 4
## 5
## 6
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1
## 2
## 3
## 4
## 5
## 6
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1
## 2
## 3
## 4
## 5
## 6
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1
## 2
## 3
## 4
## 5
```

```
## 6
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response...
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
```

```
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
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##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
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## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
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## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
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## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
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## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
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## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
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## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
```

```
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.school
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
```

```
##    Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
```

```
## 5
## 6
##   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.year:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.year:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.year:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.year:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.year:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.year:
## 1
## 2
## 3
## 4
## 5
## 6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
## 1
## 2
## 3
## 4
## 5
## 6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
## 1
## 2
```

```
##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
##   1
##   2
##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
##   1
##   2
##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
##   1
##   2
##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
##   1
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##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##   2
##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
##   1
##   2
##   3
##   4
##   5
##   6
##     What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
```

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## 1
## 2
## 3
## 4
## 5
## 6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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## 6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
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## 4
## 5
## 6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
## 1
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## 5
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##   6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choic
## 1
## 2
## 3
## 4
## 5
## 6
##   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Other...Text
## 1                                                                                              -1
## 2                                                                                              -1
## 3                                                                                              -1
## 4                                                                                              -1
## 5                                                                                              -1
## 6                                                                                              -1
##   What.specific.programming.language.do.you.use.most.often....Selected.Choice
## 1                                                         Javascript/Typescript
## 2                                                                             R
## 3                                                                        MATLAB
## 4
## 5                                                                             R
## 6                                                                           PHP
##   What.specific.programming.language.do.you.use.most.often....Other...Text
## 1                                                                       -1
## 2                                                                       -1
## 3                                                                       -1
## 4                                                                       -1
## 5                                                                       -1
## 6                                                                       -1
##   What.programming.language.would.you.recommend.an.aspiring.data.scientist.to.learn.first....Selecte
## 1
## 2
## 3
## 4
## 5
## 6
##   What.programming.language.would.you.recommend.an.aspiring.data.scientist.to.learn.first....Other..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
## 4
## 5
## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
```

```
## 4
## 5
## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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## 2
## 3
## 4
## 5
## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
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## 3
## 4
## 5
## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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## 4
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## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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## 2
## 3
## 4
## 5
## 6
##   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
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```
## 2
## 3
## 4
## 5
## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
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## 2
## 3
## 4
## 5
## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
## 4
## 5
## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
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## 6
##    What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
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##      What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
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## 5
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##      What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sele
## 1
## 2
## 3
## 4
## 5
## 6
##      What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Other
## 1
## 2
## 3
## 4
## 5
## 6
##    Of.the.choices.that.you.selected.in.the.previous.question..which.ML.library.have.you.used.the.most
## 1
## 2
## 3
## 4
## 5
## 6
##    Of.the.choices.that.you.selected.in.the.previous.question..which.ML.library.have.you.used.the.most
## 1
## 2
## 3
## 4
## 5
## 6
##    What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.app1
## 1
## 2
## 3
## 4
## 5
## 6
##    What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.app1
## 1
## 2
## 3
## 4
## 5
## 6
##    What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.app1
## 1
## 2
## 3
## 4
```

```
## 5
## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
## 2
## 3
## 4
## 5
## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
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## 4
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## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
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## 4
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## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
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## 4
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## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
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##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
## 2
## 3
## 4
## 5
## 6
##   What.data.visualization.libraries.or.tools.have.you.used.in.the.past.5.years...Select.all.that.appl
## 1
## 2
## 3
## 4
## 5
## 6
##   Of.the.choices.that.you.selected.in.the.previous.question..which.specific.data.visualization.libra
## 1
## 2
## 3
## 4
## 5
## 6
##   Of.the.choices.that.you.selected.in.the.previous.question..which.specific.data.visualization.libra
## 1
## 2
## 3
## 4
## 5
## 6
##   Approximately.what.percent.of.your.time.at.work.or.school.is.spent.actively.coding.
## 1                                                    50% to 74% of my time
## 2                                                    25% to 49% of my time
## 3                                                        100% of my time
## 4                                                          0% of my time
## 5                                                    50% to 74% of my time
## 6                                                        100% of my time
##   How.long.have.you.been.writing.code.to.analyze.data.
## 1                                      3-5 years
## 2                                      1-2 years
## 3                                     5-10 years
## 4          I have never written code but I want to learn
## 5                                      1-2 years
## 6          I have never written code but I want to learn
##   For.how.many.years.have.you.used.machine.learning.methods..at.work.or.in.school..
```

```
## 1                                                                  < 1 year
## 2                                                                  1-2 years
## 3                                                                  3-4 years
## 4             I have never studied machine learning but plan to learn in the future
## 5                                                                  1-2 years
## 6                                                                  < 1 year
##   Do.you.consider.yourself.to.be.a.data.scientist.
## 1                                             Maybe
## 2                                   Definitely yes
## 3                                   Definitely yes
## 4                                     Probably yes
## 5                                             Maybe
## 6                                   Definitely not
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
```

```
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
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## 4
## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
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## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
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##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
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## 5
## 6
##   Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
## 1
## 2
## 3
```

```
##  4
##  5
##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
##  2
##  3
##  4
##  5
##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
##  2
##  3
##  4
##  5
##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
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##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
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##  4
##  5
##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
##  2
##  3
##  4
##  5
##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
##  2
##  3
##  4
##  5
##  6
##    Which.of.the.following.cloud.computing.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
##  2
##  3
##  4
##  5
##  6
##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.years
##  1
```

```
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
## 2
## 3
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## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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## 3
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 5
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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```
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 5
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 5
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
## 2
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## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
## 2
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## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
## 2
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```
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
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##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
## 1
## 2
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## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea
```

```
## 1
## 2
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## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
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## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.yea:
## 1
## 2
## 3
## 4
## 5
```

```
##   6
##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.machine.learning.products.have.you.used.at.work.or.school.in.the.last.5.year
## 1
## 2
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## 5
## 6
##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
## 1
## 2
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## 5
## 6
##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
## 1
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## 3
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##   4
##   5
##   6
##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##   4
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##   6
##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##   6
##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##   4
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##   6
##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##   6
##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
##   1
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##     Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
##   1
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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## 6
##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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## 5
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
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## 6
##    Which.of.the.following.relational.database.products.have.you.used.at.work.or.school.in.the.last.5.y
## 1
## 2
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## 4
## 5
## 6
##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##    Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 5
## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 4
## 5
## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 4
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 4
## 5
## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
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## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.of.the.following.big.data.and.analytics.products.have.you.used.at.work.or.school.in.the.last
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
```

```
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
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## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
```

```
## 2
## 3
## 4
## 5
## 6
##    Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##    Which.types.of.data.do.you.currently.interact.with.most.often.at.work.or.school...Select.all.that.a
## 1
## 2
## 3
## 4
## 5
## 6
##    What.is.the.type.of.data.that.you.currently.interact.with.most.often.at.work.or.school....Selected
## 1                                                                                               Imag
## 2                                                                                             Tabula
## 3                                                                                   Time Serio
## 4
## 5                                                                                   Time Serio
## 6
##    What.is.the.type.of.data.that.you.currently.interact.with.most.often.at.work.or.school....Other.Da
## 1
## 2
## 3
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Government.websites
## 1                                                                              Government websites
## 2                                                                              Government websites
## 3
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...University.research
## 1                                                                              University research
## 2
## 3
## 4
## 5
## 6
```

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```
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Non.profit.research
## 1                                                                                 Non-profit research
## 2
## 3
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Dataset.aggregator.
## 1                                                                                 Dataset aggregator/
## 2                                                                                 Dataset aggregator/
## 3                                                                                 Dataset aggregator/
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...I.collect.my.own.da
## 1                                                                                 I collect my own da
## 2                                                                                 I collect my own da
## 3
## 4
## 5                                                                                 I collect my own da
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Publicly.released.da
## 1                                                                                 Publicly released da
## 2                                                                                 Publicly released da
## 3
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Google.Search
## 1                                                                                 Google Search
## 2
## 3
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Google.Dataset.Sear
## 1                                                                                 Google Dataset Sear
## 2
## 3
## 4
## 5                                                                                 Google Dataset Sear
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...GitHub
## 1                                                                                 GitHub
## 2
## 3
## 4
## 5
## 6
##    Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...None.I.do.not.work.
## 1
## 2
## 3
## 4
```

```
## 5
## 6
##   Where.do.you.find.public.datasets...Select.all.that.apply....Selected.Choice...Other
## 1
## 2
## 3
## 4
## 5
## 6
##   Where.do.you.find.public.datasets...Select.all.that.apply....Other...Text
## 1                                                                            -1
## 2                                                                            -1
## 3                                                                            -1
## 4                                                                            -1
## 5                                                                            -1
## 6                                                                            -1
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
```

```
## 3
## 4
## 5
## 6
##   During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
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## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
## 1
## 2
## 3
## 4
## 5
## 6
##   What.percentage.of.your.current.machine.learning.data.science.training.falls.under.each.category..
```

```
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
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```
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platforms.have.you.begun.or.completed.data.science.courses...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##    On.which.online.platform.have.you.spent.the.most.amount.of.time....Selected.Choice
## 1                                                                      Kaggle Learn
## 2
## 3
```

```
## 4
## 5                                                                                   DataCamp
## 6
##   On.which.online.platform.have.you.spent.the.most.amount.of.time....Other...Text
## 1                                                                               -1
## 2                                                                               -1
## 3                                                                               -1
## 4                                                                               -1
## 5                                                                               -1
## 6                                                                               -1
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
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## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
```

```
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
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## 3
## 4
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
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```
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 2
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## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 2
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## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
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## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 4
## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
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## 3
## 4
## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##     Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
```

```
## 5
## 6
##   Who.what.are.your.favorite.media.sources.that.report.on.data.science.topics...Select.all.that.apply
## 1
## 2
## 3
## 4
## 5
## 6
##   How.do.you.perceive.the.quality.of.online.learning.platforms.and.in.person.bootcamps.as.compared.to
## 1
## 2
## 3
## 4
## 5
## 6
##   How.do.you.perceive.the.quality.of.online.learning.platforms.and.in.person.bootcamps.as.compared.to
## 1
## 2
## 3
## 4
## 5
## 6
##   Which.better.demonstrates.expertise.in.data.science..academic.achievements.or.independent.projects
## 1                          Independent projects are slightly less important than academ
## 2                            Independent projects are much more important than academ
## 3                              Independent projects are equally important as academ
## 4                              Independent projects are equally important as academ
## 5                          Independent projects are slightly more important than academ
## 6                            Independent projects are much more important than academ
##   How.do.you.perceive.the.importance.of.the.following.topics....Fairness.and.bias.in.ML.algorithms.
## 1                                                              Very important
## 2                                                              Very important
## 3                                                              Very important
## 4
## 5                                                          Slightly important
## 6
##   How.do.you.perceive.the.importance.of.the.following.topics....Being.able.to.explain.ML.model.outpu
## 1
## 2
## 3
## 4
## 5
## 6
##   How.do.you.perceive.the.importance.of.the.following.topics....Reproducibility.in.data.science
## 1                                                              Very important
## 2                                                              Very important
## 3                                                              Very important
## 4
## 5                                                              Very important
## 6
##   What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successfu
## 1
## 2
```

```
## 3
## 4
## 5
## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successf
## 1
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## 3
## 4
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## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successf
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##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successf
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## 4
## 5
## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successf
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## 2
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## 4
## 5
## 6
##    What.metrics.do.you.or.your.organization.use.to.determine.whether.or.not.your.models.were.successf
## 1
## 2
## 3
## 4
## 5
## 6
##    Approximately.what.percent.of.your.data.projects.involved.exploring.unfair.bias.in.the.dataset.and
## 1
## 2
## 3
## 4
## 5
## 6
##    What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##    What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
```

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```
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
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## 4
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## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   What.do.you.find.most.difficult.about.ensuring.that.your.algorithms.are.fair.and.unbiased...Select
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
## 2
## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
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## 3
## 4
## 5
## 6
##   In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Se
## 1
## 2
## 3
## 4
## 5
```

```
## 6
##    In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Sel
## 1
## 2
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## 4
## 5
## 6
##    In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Sel
## 1
## 2
## 3
## 4
## 5
## 6
##    In.what.circumstances.would.you.explore.model.insights.and.interpret.your.model.s.predictions...Sel
## 1
## 2
## 3
## 4
## 5
## 6
##    Approximately.what.percent.of.your.data.projects.involve.exploring.model.insights.
## 1                                                                                   0
## 2                                                                               10-20
## 3                                                                                0-10
## 4
## 5                                                                               10-20
## 6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
## 2
## 3
## 4
## 5
## 6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
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## 5
## 6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 5
## 6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 6
##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##    What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 4
## 5
## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
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## 4
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## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
## 2
## 3
## 4
## 5
## 6
##   What.methods.do.you.prefer.for.explaining.and.or.interpreting.decisions.that.are.made.by.ML.models
## 1
## 2
## 3
## 4
## 5
## 6
##   Do.you.consider.ML.models.to.be..black.boxes..with.outputs.that.are.difficult.or.impossible.to.expl
## 1      I view ML models as "black boxes" but I am confident that experts are able to explain model ou
## 2      I view ML models as "black boxes" but I am confident that experts are able to explain model ou
## 3              I am confident that I can understand and explain the outputs of many but not all ML m
## 4
## 5              I am confident that I can understand and explain the outputs of many but not all ML m
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
## 1
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## 4
## 5
## 6
##   What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Se
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Sc
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Sc
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##    What.tools.and.methods.do.you.use.to.make.your.work.easy.to.reproduce...Select.all.that.apply....Ot
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##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
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##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
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##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
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##    What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.tha
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##   What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.th
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## 3
## 4
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## 6
##   What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.th
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## 4
## 5
## 6
##   What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.th
## 1
## 2
## 3
## 4
## 5
## 6
##   What.barriers.prevent.you.from.making.your.work.even.easier.to.reuse.and.reproduce...Select.all.th
## 1
## 2
## 3
## 4
## 5
## 6
```

Cleaning the data and remove null value from the Dataset

How many record in the reduced dataset

```
count(min_country)
```

```
## # A tibble: 1 x 1
##       n
##   <int>
## 1   852
```

We can use 852 records to get some good insight about the state of data science. However our dataset might be cluttered with NA values. Let's check our dataset for NA. We will use the summary function to see if there is NA.

```
min_country %>%
  summarize(number_nas = sum(is.na(Country)))
```

```
##   number_nas
## 1          0
```

Is it true the dataset does not have any null value. We can check that assumption checking all the columns in the dataset for NA. We will use the purrr package that allows us to apply the function to all columns in

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the dataset

```r
min_country %>%
  purrr::map_df(~ sum(is.na(.)))
```

```
## # A tibble: 1 x 395
##   Duration..in.se~ What.is.your.ge~ What.is.your.ge~ What.is.your.ag~
##              <int>            <int>            <int>            <int>
## 1                0                0                0                0
## # ... with 391 more variables: Country <int>,
## #   What.is.the.highest.level.of.formal.education.that.you.have.attained.or.plan.to.attain.within.th~
## #   Which.best.describes.your.undergraduate.major....Selected.Choice <int>,
## #   Select.the.title.most.similar.to.your.current.role..or.most.recent.title.if.retired.....Selected~
## #   Select.the.title.most.similar.to.your.current.role..or.most.recent.title.if.retired.....Other...~
## #   In.what.industry.is.your.current.employer.contract..or.your.most.recent.employer.if.retired.....S~
## #   In.what.industry.is.your.current.employer.contract..or.your.most.recent.employer.if.retired.....U~
## #   How.many.years.of.experience.do.you.have.in.your.current.role. <int>,
## #   What.is.your.current.yearly.compensation..approximate..USD.. <int>,
## #   Does.your.current.employer.incorporate.machine.learning.methods.into.their.business. <int>,
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   Select.any.activities.that.make.up.an.important.part.of.your.role.at.work...Select.all.that.appl~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at.work.or.scho~
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel~
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel~
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel~
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel~
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel~
```

```
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.hosted.notebooks.have.you.used.at.work.or.school.in.the.last.5.years...Sel
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   Which.of.the.following.cloud.computing.services.have.you.used.at.work.or.school.in.the.last.5.yea
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Selected.Choi
## #   What.programming.languages.do.you.use.on.a.regular.basis...Select.all.that.apply....Other...Text
## #   What.specific.programming.language.do.you.use.most.often....Selected.Choice <int>,
## #   What.specific.programming.language.do.you.use.most.often....Other...Text <int>,
## #   What.programming.language.would.you.recommend.an.aspiring.data.scientist.to.learn.first....Select
## #   What.programming.language.would.you.recommend.an.aspiring.data.scientist.to.learn.first....Other
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
## #   What.machine.learning.frameworks.have.you.used.in.the.past.5.years...Select.all.that.apply....Sel
```

```
## #   ...
```

Now can we be certain there is no empty string. Let's check a specific column

```
min_country %>%
  count(Which.best.describes.your.undergraduate.major....Selected.Choice) %>%
  rename("Undergraduate Major"= Which.best.describes.your.undergraduate.major....Selected.Choice)
```

```
## # A tibble: 14 x 2
##    `Undergraduate Major`                                        n
##    <fct>                                                    <int>
##  1 ""                                                          24
##  2 A business discipline (accounting, economics, finance, etc.)  49
##  3 Computer science (software engineering, etc.)              308
##  4 Engineering (non-computer focused)                        151
##  5 Environmental science or geology                           13
##  6 Fine arts or performing arts                                2
##  7 Humanities (history, literature, philosophy, etc.)          3
##  8 I never declared a major                                    4
##  9 Information technology, networking, or system administration  54
## 10 Mathematics or statistics                                 148
## 11 Medical or life sciences (biology, chemistry, medicine, etc.)  33
## 12 Other                                                      27
## 13 Physics or astronomy                                       24
## 14 Social sciences (anthropology, psychology, sociology, etc.)  12
```

Here we can see there are 24 people that didn't respond to the question. Now let's replace all the empty strings with NAs using the condition na_if

```
#min_country<-min_country %>%
  #na_if("")
#min_country
```

```
#min_country %>%
 # purrr::map_df(~ sum(is.na(.)))
```

Now we can see most of them have NAs.

Analyzing And Visualizing of our data

```
#colnames(min_country)
```

We have 395 columns in the dataset.

For the sake of our analysis we are going to select all numeric columns and get the statistics for all of them. We are going to use the skimr package to do so.

```
library(skimr)
```

```
min_country %>%
  select_if(is.numeric) %>%
  skimr::skim()
```

```
## Skim summary statistics
##  n obs: 852
##  n variables: 48
##
```

```
## -- Variable type:integer -------------------------------------------------------
##
##
##           During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.yc
##                                                  In.what.industry.is.your.current.c
##                                               Of.the.choices.that.you.selected.in.the
##                    Of.the.choices.that.you.selected.in.the.previous.question..which.specific
##                                                                              On.wh
##                                              On.which.online.platforms.have.you.begur
##                                        Select.any.activities.that.make.up.an..
##                                                         Select.the.title.most.simi
##                                       What.barriers.prevent.you.from.making.your.work
##                                                  What.data.visualization.libraries.or.tools
##                     What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...inclu
##       What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response.
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response....N
##              What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text..
##   What.is.the.primary.tool.that.you.use.at.work.or.school.to.analyze.data...include.text.response....N
##                                                            What.is.the.primary.tool.that.you.use
##                                                            What.is.the.type.of.data.that.you
##
##                                                            What.machine.learning.frameworks
##                               What.metrics.do.you.or.your.organization.use.to.determine.whether
##                          What.percentage.of.your.current.machine.learning.data.science.train
##                                                   What.programming.language.wou
##                                                      What.programming.langu
##
##                                                   What.tools.and.methods.do.you.use.t
##
##                 Which.of.the.following.big.data.and.analytics.products.have.you.used.at
##                        Which.of.the.following.cloud.computing.products.have.you.used.at
##                        Which.of.the.following.cloud.computing.services.have.you.used.at
##                            Which.of.the.following.hosted.notebooks.have.you.used.at
##           Which.of.the.following.integrated.development.environments..IDE.s..have.you.used.at
##                        Which.of.the.following.machine.learning.products.have.you.used.at
##                        Which.of.the.following.relational.database.products.have.you.used.at
##                                           Which.types.of.data.do.you.currently.interact.with
##                                                   Who.what.are.your.favorite.media.sources
## missing complete  n      mean       sd p0    p25    p50  p75   p100
##       0      852 852 14959.43 54320.14 39 785.25 1272.5 2795 528150
##       0      852 852    21.01    17.53 -1     -1     33   33     92
##       0      852 852     9.61    57.04 -1     -1     -1   -1    547
##       0      852 852    -0.98     0.51 -1     -1     -1   -1     14
##       0      852 852    -1        0    -1     -1     -1   -1     -1
##       0      852 852    -0.042   10.88 -1     -1     -1   -1    210
##       0      852 852     9.68    65.82 -1     -1     -1   -1    618
##       0      852 852     3.37    32.5  -1     -1     -1   -1    359
##       0      852 852    28.9    124.19 -1     -1     -1   -1    840
##       0      852 852     1       26.25 -1     -1     -1   -1    380
##       0      852 852     0.97    18.04 -1     -1     -1   -1    269
##       0      852 852    16.81    74.71 -1     -1     -1   -1    500
##       0      852 852    56.55   199.94 -1     -1     -1   -1   1202
##       0      852 852     4.37    39.59 -1     -1     -1   -1    472
##       0      852 852     2.44    33.67 -1     -1     -1   -1    509
```

```
##          0    852 852    280.03    710.38 -1  -1        -1    21  3305
##          0    852 852     22.91    130.66 -1  -1        -1    -1  1104
##          0    852 852     -0.89      1.8  -1  -1        -1    -1    34
##          0    852 852     -0.93      1.53 -1  -1        -1    -1    41
##          0    852 852      1.17     20.62 -1  -1        -1    -1   293
##          0    852 852     -0.58      7.37 -1  -1        -1    -1   165
##          0    852 852      3.4      32.56 -1  -1        -1    -1   358
##          0    852 852     -0.53      6.16 -1  -1        -1    -1    98
##          0    852 852      1.6      22.91 -1  -1        -1    -1   303
##          0    852 852     -0.87      2.75 -1  -1        -1    -1    71
##          0    852 852     -0.49      8.34 -1  -1        -1    -1   166
##          0    852 852      0.73     17.23 -1  -1        -1    -1   267
##          0    852 852     -0.12      9.61 -1  -1        -1    -1   146
##          0    852 852      0.35     13.36 -1  -1        -1    -1   200
##          0    852 852      1.48     21.99 -1  -1        -1    -1   342
##          0    852 852      1.48     22.62 -1  -1        -1    -1   308
##          0    852 852      3.71     35.85 -1  -1        -1    -1   470
##          0    852 852     -0.58      6.84 -1  -1        -1    -1   139
##          0    852 852     -0.4       7.65 -1  -1        -1    -1   172
##          0    852 852     -0.36      8.01 -1  -1        -1    -1   136
##          0    852 852     18.71    106.46 -1  -1        -1    -1   834
##     hist
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2587><U+2583><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2581><U+2581><U+2581><U+2587><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
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## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
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## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
## <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
```

```
##   <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
##   <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
##   <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
##   <U+2587><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581><U+2581>
##
## -- Variable type:numeric ----------------------------------------------------
##
##                                                During.a.typical.data.science.project.at.work.or
##  During.a.typical.data.science.project.at.work.or.school..approximately.what.proportion.of.your.time
##                                              During.a.typical.data.science.project.at.work.or.s
##                                  During.a.typical.data.science.project.at.work.or.school..approxima
##                              During.a.typical.data.science.project.at.work.or.school..approximatel
##                                         During.a.typical.data.science.project.at.work.or.sch
##                                                             What.percentage.of.your
##                                    What.percentage.of.your.current.machine.learning
##                                                                        What.perc
##                                                             What.percentage
##                                                            What.percentage
##                                                                  What.perc
##   missing complete   n  mean    sd p0 p25 p50 p75 p100     hist
##       283       569 852 24.02 15.95  0  10  20  30   80 <U+2587><U+2587><U+2586><U+2583><U+2582><U+258
##       283       569 852 11.4   9.81  0   5  10  15   70 <U+2586><U+2587><U+2583><U+2581><U+2581><U+258
##       283       569 852 17.57 14.05  0  10  15  20  100 <U+2587><U+2585><U+2582><U+2581><U+2581><U+258
##       283       569 852 18.91 13.36  0  10  20  25  100 <U+2587><U+2587><U+2583><U+2581><U+2581><U+258
##       283       569 852  9.54  9.14  0   0  10  15   60 <U+2587><U+2586><U+2582><U+2581><U+2581><U+258
##       283       569 852 14.15  9.73  0  10  10  20   80 <U+2587><U+2585><U+2581><U+2581><U+2581><U+258
##       288       564 852  7.68 12.46  0   0   0  10  100 <U+2587><U+2581><U+2581><U+2581><U+2581><U+258
##       288       564 852 29.05 27.13  0   5  20  50  100 <U+2587><U+2583><U+2583><U+2583><U+2581><U+258
##       288       564 852  1.78  9.05  0   0   0   0  100 <U+2587><U+2581><U+2581><U+2581><U+2581><U+258
##       288       564 852 33.56 25.29  0  15  30  50  100 <U+2587><U+2586><U+2586><U+2586><U+2582><U+258
##       288       564 852 14.63 22.23  0   0   0  20  100 <U+2587><U+2582><U+2581><U+2581><U+2581><U+258
##       288       564 852 13.29 20     0   0   0  20  100 <U+2587><U+2582><U+2581><U+2581><U+2581><U+258
```

As we can see as a glance we have the mean, the standard deviation, the percentile and the histogram for all numeric variables.

In the survey we might be interested in distinct responses provided by the responders. We are going the gather function to transform our wide dataset to a long dataset

```
min_country %>%
  purrr::map_df(~ n_distinct(.)) %>%
  gather(Questions, distinct_answers) %>%
  arrange(desc(distinct_answers))
```

```
## # A tibble: 395 x 2
##    Questions                                    distinct_answers
##    <chr>                                                   <int>
##  1 Duration..in.seconds.                                     770
##  2 What.is.the.primary.tool.that.you.use.at.work.or.scho~    174
##  3 What.is.the.primary.tool.that.you.use.at.work.or.scho~     91
##  4 What.is.the.primary.tool.that.you.use.at.work.or.scho~     61
##  5 Select.the.title.most.similar.to.your.current.role..o~     60
##  6 What.is.the.primary.tool.that.you.use.at.work.or.scho~     44
##  7 Who.what.are.your.favorite.media.sources.that.report.~     42
##  8 In.what.industry.is.your.current.employer.contract..o~     40
##  9 During.a.typical.data.science.project.at.work.or.scho~     30
```

```
## 10 On.which.online.platforms.have.you.begun.or.completed~        29
## # ... with 385 more rows
```

In our dataset the primary tools used at work or at school vary. In a dataset of 800, 174 responders use different tools.

Let's focus on the programming laguages used by our population for their work in datascience.

```
language<-min_country %>%
  select(What.specific.programming.language.do.you.use.most.often....Selected.Choice) %>%
  rename("Specific Programming Language"=What.specific.programming.language.do.you.use.most.often....Sel
  filter(!is.na("Specific Programming Language"))
language
```

```
##      Specific Programming Language
## 1            Javascript/Typescript
## 2                                R
## 3                           MATLAB
## 4
## 5                                R
## 6                              PHP
## 7                           Python
## 8
## 9                           Python
## 10                          Python
## 11                            Java
## 12                          Python
## 13                          Python
## 14
## 15                         C#/.NET
## 16
## 17                          Python
## 18                               R
## 19                          Python
## 20                          Python
## 21                          Python
## 22
## 23                          Python
## 24                          Python
## 25                         C#/.NET
## 26                          Python
## 27                          Python
## 28                               R
## 29                          Python
## 30                               R
## 31
## 32                            Java
## 33
## 34                          MATLAB
## 35                          Python
## 36                          Python
## 37                               R
## 38                         C#/.NET
## 39                         C#/.NET
## 40                          Python
## 41                             SQL
```

```
## 42                                  Java
## 43                                Python
## 44                                Python
## 45                                MATLAB
## 46
## 47                                   SQL
## 48                                     R
## 49
## 50                                Python
## 51                                Python
## 52                                Python
## 53                                Python
## 54                                Python
## 55                                  Java
## 56                                     R
## 57                                     R
## 58                               C#/.NET
## 59                   Visual Basic/VBA
## 60                                     R
## 61                                  Bash
## 62                                     R
## 63                                Python
## 64                                     R
## 65                                MATLAB
## 66                                     R
## 67                                Python
## 68
## 69                                   SQL
## 70               Javascript/Typescript
## 71                            SAS/STATA
## 72                                Python
## 73                                   SQL
## 74                                Python
## 75                                     R
## 76                                Python
## 77                                     R
## 78                                  Bash
## 79                                Python
## 80                                     R
## 81                                Python
## 82                                Python
## 83                                     R
## 84                                Python
## 85                                Python
## 86
## 87
## 88                            SAS/STATA
## 89
## 90
## 91                                Python
## 92
## 93
## 94                                Python
## 95                                 C/C++
```

```
## 96                             R
## 97                        C#/.NET
## 98
## 99
## 100                          SQL
## 101
## 102                            R
## 103
## 104                            R
## 105
## 106
## 107                         Ruby
## 108                       Python
## 109                          PHP
## 110                       Python
## 111         Javascript/Typescript
## 112
## 113                       Python
## 114                       Python
## 115
## 116
## 117                          SQL
## 118                            R
## 119
## 120
## 121                         Java
## 122
## 123                            R
## 124
## 125
## 126
## 127         Javascript/Typescript
## 128
## 129
## 130
## 131         Javascript/Typescript
## 132
## 133                       Python
## 134
## 135
## 136                          SQL
## 137
## 138
## 139         Javascript/Typescript
## 140                       Python
## 141
## 142                       Python
## 143                       Python
## 144                            R
## 145              Visual Basic/VBA
## 146                       Python
## 147                       Python
## 148         Javascript/Typescript
## 149                            R
```

```
## 150                         Python
## 151                            SQL
## 152
## 153          Javascript/Typescript
## 154
## 155                         Python
## 156                         Python
## 157
## 158                           Java
## 159
## 160
## 161                            PHP
## 162
## 163                         Python
## 164                             Go
## 165                            PHP
## 166
## 167
## 168            Visual Basic/VBA
## 169                           Java
## 170
## 171                         Python
## 172                         Python
## 173                         Python
## 174                         Python
## 175
## 176                            SQL
## 177
## 178                         Python
## 179
## 180
## 181                         Python
## 182
## 183                         Python
## 184                           Java
## 185
## 186                         Python
## 187
## 188                         Python
## 189                         Python
## 190                            SQL
## 191                         Python
## 192                         Python
## 193                         Python
## 194
## 195                         Python
## 196
## 197                              R
## 198
## 199                         Python
## 200                            PHP
## 201                              R
## 202                         Python
## 203
```

```
## 204
## 205                         Python
## 206                         Python
## 207                         Python
## 208
## 209
## 210                         Python
## 211                         Python
## 212
## 213                         Python
## 214                         Python
## 215
## 216                         Python
## 217
## 218                              R
## 219
## 220                         Python
## 221                         Python
## 222       Javascript/Typescript
## 223                            SQL
## 224
## 225                           Java
## 226
## 227                              R
## 228                         Python
## 229                         Python
## 230                              R
## 231                         Python
## 232                         Python
## 233
## 234                         Python
## 235                         Python
## 236
## 237                         Python
## 238
## 239
## 240                         Python
## 241
## 242                         Python
## 243
## 244
## 245                         Python
## 246                         Python
## 247                              R
## 248                         Python
## 249
## 250                         Python
## 251                         Python
## 252                              R
## 253
## 254
## 255
## 256
## 257
```

```
## 258                            
## 259                            
## 260                       Java 
## 261                            
## 262                            
## 263                            
## 264                            
## 265                     Python 
## 266                          R 
## 267                            
## 268                            
## 269                            
## 270                            
## 271                          R 
## 272                            
## 273                            
## 274                            
## 275                            
## 276                        SQL 
## 277                            
## 278                            
## 279                    C#/.NET 
## 280                            
## 281                     Python 
## 282                            
## 283                     Python 
## 284                            
## 285                          R 
## 286                            
## 287                            
## 288                     Python 
## 289                            
## 290                            
## 291                            
## 292                            
## 293                       Java 
## 294                            
## 295                            
## 296                     Python 
## 297                            
## 298                            
## 299                            
## 300                            
## 301                            
## 302                       Java 
## 303                       Java 
## 304                            
## 305                            
## 306                            
## 307                            
## 308                     Python 
## 309                            
## 310                            
## 311                            
```

```
## 312
## 313                  Javascript/Typescript
## 314                            Python
## 315
## 316                              Java
## 317
## 318                             C/C++
## 319                            Python
## 320
## 321                               SQL
## 322
## 323
## 324
## 325                            Python
## 326
## 327
## 328                  Javascript/Typescript
## 329
## 330
## 331
## 332                             Other
## 333
## 334
## 335
## 336
## 337
## 338                            Python
## 339                             C/C++
## 340                                 R
## 341                            Python
## 342                                 R
## 343
## 344                               PHP
## 345
## 346                                 R
## 347                               SQL
## 348
## 349
## 350                            Python
## 351                            Python
## 352                            Python
## 353                                 R
## 354                               SQL
## 355                            Python
## 356                               PHP
## 357                                 R
## 358                            Python
## 359                         SAS/STATA
## 360                               PHP
## 361                               SQL
## 362                                 R
## 363                            Python
## 364                                 R
## 365                         SAS/STATA
```

```
## 366                          R
## 367
## 368                     Python
## 369                     Python
## 370      Javascript/Typescript
## 371                          R
## 372                          R
## 373                          R
## 374                       Java
## 375                          R
## 376                       Java
## 377                     Python
## 378                        SQL
## 379                          R
## 380
## 381                     Python
## 382
## 383                     Python
## 384                     Python
## 385                     Python
## 386                          R
## 387                     Python
## 388                        PHP
## 389                       Java
## 390
## 391                     Python
## 392                     Python
## 393
## 394
## 395
## 396
## 397
## 398                     Python
## 399
## 400                     Python
## 401
## 402
## 403                          R
## 404
## 405      Javascript/Typescript
## 406                        SQL
## 407                          R
## 408                     Python
## 409
## 410                     Python
## 411
## 412                       Java
## 413
## 414
## 415
## 416                          R
## 417                          R
## 418                          R
## 419                          R
```

```
## 420
## 421
## 422
## 423
## 424                       Python
## 425                       Python
## 426                       Python
## 427                          SQL
## 428        Javascript/Typescript
## 429
## 430                       Python
## 431
## 432                       Python
## 433                            R
## 434
## 435                       Python
## 436        Javascript/Typescript
## 437                        C/C++
## 438                            R
## 439                       Python
## 440                         Java
## 441                       Python
## 442                       Python
## 443                       Python
## 444                         Java
## 445
## 446                       Python
## 447                          PHP
## 448
## 449
## 450                       Python
## 451
## 452                       Python
## 453                    SAS/STATA
## 454                         Java
## 455                          SQL
## 456                       Python
## 457                       Python
## 458                       MATLAB
## 459                       Python
## 460
## 461                          SQL
## 462                       Python
## 463
## 464                         Java
## 465            Visual Basic/VBA
## 466                          SQL
## 467                            R
## 468                          PHP
## 469                          PHP
## 470                       Python
## 471
## 472
## 473        Javascript/Typescript
```

```
## 474                    
## 475                    PHP
## 476                    
## 477         Visual Basic/VBA
## 478                 Python
## 479                    
## 480                 Python
## 481                 Python
## 482                      R
## 483                 Python
## 484                 Python
## 485                    
## 486                    
## 487                 MATLAB
## 488                 Python
## 489                 Python
## 490         Visual Basic/VBA
## 491                 MATLAB
## 492                   Java
## 493                    
## 494                    PHP
## 495                   Java
## 496                    
## 497                 Python
## 498                 Python
## 499                 Python
## 500                 Python
## 501                 Python
## 502                    PHP
## 503                   Java
## 504                 Python
## 505                 Python
## 506                  Other
## 507                      R
## 508                      R
## 509                      R
## 510                 Python
## 511               C#/.NET
## 512                   Java
## 513                    
## 514                    
## 515                    
## 516                      R
## 517                    
## 518                    
## 519                    
## 520                 Python
## 521                      R
## 522                    SQL
## 523                 MATLAB
## 524                 Python
## 525                  C/C++
## 526                 Python
## 527                    
```

```
## 528
## 529                                  R
## 530
## 531
## 532
## 533
## 534
## 535
## 536
## 537                                SQL
## 538                               Java
## 539                                  R
## 540
## 541
## 542                            C#/.NET
## 543
## 544
## 545                                PHP
## 546
## 547                                PHP
## 548
## 549                               Java
## 550
## 551
## 552                             Python
## 553                                PHP
## 554
## 555
## 556
## 557
## 558
## 559
## 560
## 561                             MATLAB
## 562
## 563
## 564
## 565
## 566
## 567
## 568                               Java
## 569                                PHP
## 570
## 571
## 572                               Java
## 573                             Python
## 574                                  R
## 575                                  R
## 576
## 577
## 578
## 579                             Python
## 580
## 581
```

```
## 582
## 583              Javascript/Typescript
## 584
## 585                              R
## 586
## 587
## 588
## 589
## 590
## 591
## 592
## 593                         Python
## 594                         MATLAB
## 595                      SAS/STATA
## 596                        C#/.NET
## 597                              R
## 598                         Python
## 599                              R
## 600                         Python
## 601                         Python
## 602
## 603                         Python
## 604                         Python
## 605                         Python
## 606                         Python
## 607                         Python
## 608                         Python
## 609                         Python
## 610                         Python
## 611
## 612                      SAS/STATA
## 613                         Python
## 614                         Python
## 615                      SAS/STATA
## 616                         Python
## 617
## 618                         Python
## 619                         Python
## 620                          Other
## 621                        C#/.NET
## 622
## 623                        C#/.NET
## 624                         Python
## 625                         Python
## 626
## 627                         Python
## 628                        C#/.NET
## 629
## 630                        C#/.NET
## 631                         Python
## 632                         Python
## 633                         Python
## 634                         Python
## 635                        C#/.NET
```

```
## 636          Javascript/Typescript
## 637
## 638                         Python
## 639          Javascript/Typescript
## 640          Javascript/Typescript
## 641                            SQL
## 642                         Python
## 643                              R
## 644                            SQL
## 645                         Python
## 646                         Python
## 647                         Python
## 648
## 649                      SAS/STATA
## 650                         Python
## 651                         Python
## 652
## 653                         Python
## 654                              R
## 655                         Python
## 656
## 657                         Python
## 658
## 659                         Python
## 660                         Python
## 661                         Python
## 662                         Python
## 663                         Python
## 664                            SQL
## 665                         Python
## 666                            SQL
## 667
## 668                            SQL
## 669
## 670                         Python
## 671                         Python
## 672
## 673                      SAS/STATA
## 674                          C/C++
## 675
## 676                            SQL
## 677
## 678
## 679                         Python
## 680                         Python
## 681                          C/C++
## 682                         Python
## 683                         Python
## 684                        C#/.NET
## 685                         Python
## 686
## 687                         Python
## 688          Visual Basic/VBA
## 689
```

```
## 690                           Python
## 691
## 692                           Python
## 693                        SAS/STATA
## 694                           Python
## 695
## 696                                R
## 697                           Python
## 698                                R
## 699                                R
## 700
## 701
## 702                           Python
## 703                           Python
## 704                           Python
## 705                              SQL
## 706
## 707                        SAS/STATA
## 708
## 709                           Python
## 710
## 711                           Python
## 712                           Python
## 713                           Python
## 714
## 715
## 716                          C#/.NET
## 717
## 718
## 719
## 720
## 721
## 722
## 723                           Python
## 724
## 725                                R
## 726
## 727            Javascript/Typescript
## 728                             Java
## 729                                R
## 730
## 731                              SQL
## 732
## 733
## 734                           Python
## 735                        SAS/STATA
## 736
## 737
## 738
## 739
## 740                Visual Basic/VBA
## 741                              PHP
## 742                           Python
## 743                              SQL
```

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```
## 744                     
## 745                        Python
## 746                           PHP
## 747                        Python
## 748                          Java
## 749                        Python
## 750                     SAS/STATA
## 751                        Python
## 752                           SQL
## 753                        Python
## 754                             R
## 755                        Python
## 756                             R
## 757                             R
## 758                           SQL
## 759                           PHP
## 760                         C/C++
## 761                        Python
## 762                        Python
## 763                           SQL
## 764                             R
## 765                           PHP
## 766                           SQL
## 767                     
## 768                     
## 769                        Python
## 770                             R
## 771                       C#/.NET
## 772                     
## 773                        Python
## 774                             R
## 775                             R
## 776                        Python
## 777                         C/C++
## 778                        Python
## 779                             R
## 780                        Python
## 781                       C#/.NET
## 782                          Java
## 783                        Python
## 784                     
## 785                        Python
## 786                         C/C++
## 787                     SAS/STATA
## 788                         C/C++
## 789                     
## 790                        Python
## 791                        Python
## 792                        Python
## 793                        Python
## 794                     
## 795                             R
## 796                     SAS/STATA
## 797                        Python
```

```
## 798
## 799
## 800                                          R
## 801                                          R
## 802                                       Java
## 803
## 804                                          R
## 805                                     Python
## 806                                       Java
## 807
## 808                                     Python
## 809                                       Bash
## 810                                     Python
## 811                                          R
## 812                                          R
## 813                                      C/C++
## 814                                     Python
## 815
## 816
## 817                                     Python
## 818
## 819
## 820                                          R
## 821                                     Python
## 822                                          R
## 823                                     Python
## 824                                        SQL
## 825
## 826
## 827
## 828
## 829                                          R
## 830               Javascript/Typescript
## 831
## 832                                       Java
## 833                                          R
## 834
## 835                                     Python
## 836                                          R
## 837
## 838                                      C/C++
## 839
## 840
## 841                                        PHP
## 842
## 843                                       Java
## 844                                      C/C++
## 845                                          R
## 846
## 847
## 848                                          R
## 849                                     MATLAB
## 850                                          R
## 851                                          R
```

```
## 852
```

What is the most frequent used.

```
language_freq<-language %>%
  count(`Specific Programming Language`, sort = TRUE)

language_freq
```

```
## # A tibble: 16 x 2
##    `Specific Programming Language`      n
##    <fct>                            <int>
##  1 ""                                 305
##  2 Python                             250
##  3 R                                  100
##  4 SQL                                 38
##  5 Java                               37
##  6 PHP                                24
##  7 Javascript/Typescript              22
##  8 C#/.NET                            19
##  9 SAS/STATA                          16
## 10 C/C++                              14
## 11 MATLAB                             11
## 12 Visual Basic/VBA                    8
## 13 Bash                                3
## 14 Other                               3
## 15 Go                                  1
## 16 Ruby                                1
```

Let's visualize the language used using ggplot

```
language %>%
  count(`Specific Programming Language`) %>%
  ggplot(aes(fct_reorder(`Specific Programming Language`,n), y=n)) +
  geom_col()+
  coord_flip()
```
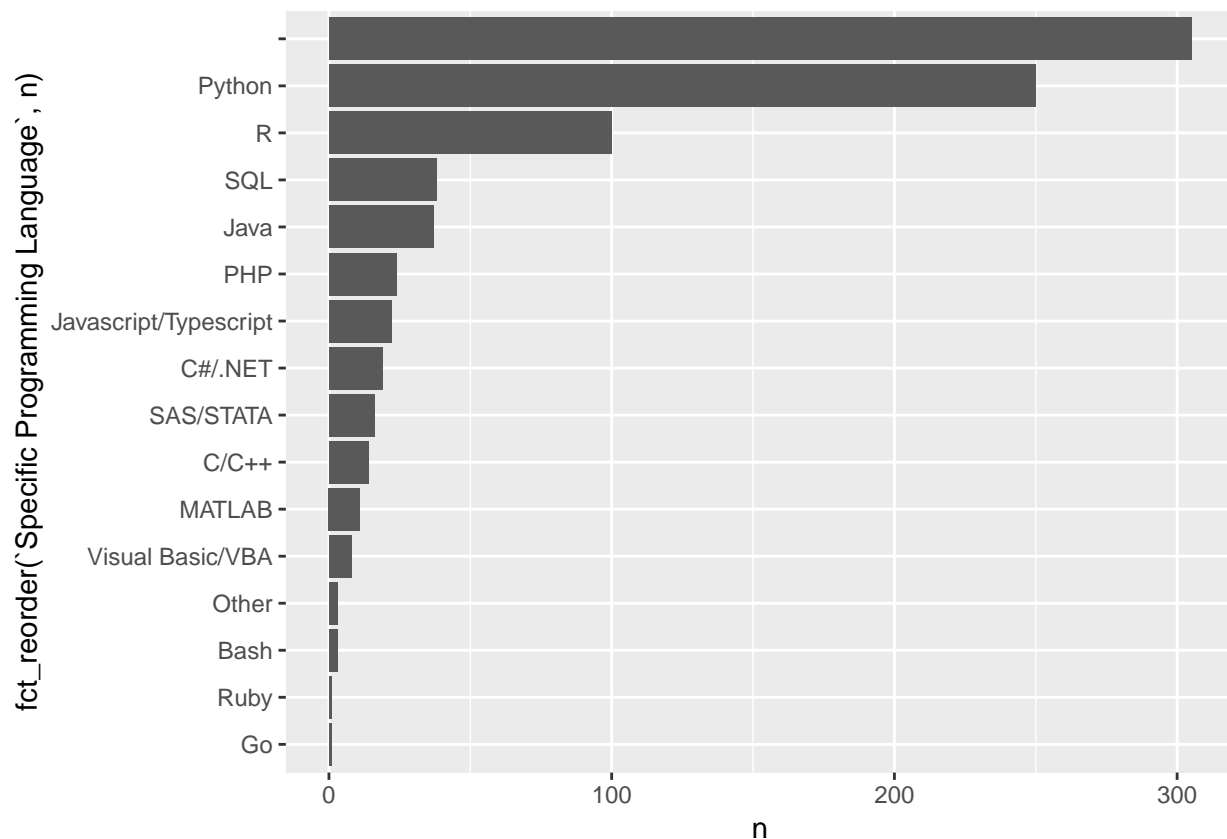
The most used language is Python followed by R.

```
data_science<-min_country %>%
  select(contains("Do.you.consider.yourself.to.be.a.data.scientist."))%>%
  gather(question,response)
data_science
```

```
##                                            question      response
## 1    Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 2    Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 3    Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 4    Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 5    Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 6    Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 7    Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 8    Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 9    Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 10   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 11   Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 12   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 13   Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 14   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 15   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 16   Do.you.consider.yourself.to.be.a.data.scientist.
## 17   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 18   Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 19   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
```

```
## 20   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 21   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 22   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 23   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 24   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 25   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 26   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 27   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 28   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 29   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 30   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 31   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 32   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 33   Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 34   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 35   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 36   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 37   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 38   Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 39   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 40   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 41   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 42   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 43   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 44   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 45   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 46   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 47   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 48   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 49   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 50   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 51   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 52   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 53   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 54   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 55   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 56   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 57   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 58   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 59   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 60   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 61   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 62   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 63   Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 64   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 65   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 66   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 67   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 68   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 69   Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 70   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 71   Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 72   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 73   Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
```

```
## 74  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 75  Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 76  Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 77  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 78  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 79  Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 80  Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 81  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 82  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 83  Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 84  Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 85  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 86  Do.you.consider.yourself.to.be.a.data.scientist.
## 87  Do.you.consider.yourself.to.be.a.data.scientist.
## 88  Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 89  Do.you.consider.yourself.to.be.a.data.scientist.
## 90  Do.you.consider.yourself.to.be.a.data.scientist.
## 91  Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 92  Do.you.consider.yourself.to.be.a.data.scientist.
## 93  Do.you.consider.yourself.to.be.a.data.scientist.
## 94  Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 95  Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 96  Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 97  Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 98  Do.you.consider.yourself.to.be.a.data.scientist.
## 99  Do.you.consider.yourself.to.be.a.data.scientist.
## 100 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 101 Do.you.consider.yourself.to.be.a.data.scientist.
## 102 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 103 Do.you.consider.yourself.to.be.a.data.scientist.
## 104 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 105 Do.you.consider.yourself.to.be.a.data.scientist.
## 106 Do.you.consider.yourself.to.be.a.data.scientist.
## 107 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 108 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 109 Do.you.consider.yourself.to.be.a.data.scientist.
## 110 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 111 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 112 Do.you.consider.yourself.to.be.a.data.scientist.
## 113 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 114 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 115 Do.you.consider.yourself.to.be.a.data.scientist.
## 116 Do.you.consider.yourself.to.be.a.data.scientist.
## 117 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 118 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 119 Do.you.consider.yourself.to.be.a.data.scientist.
## 120 Do.you.consider.yourself.to.be.a.data.scientist.
## 121 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 122 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 123 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 124 Do.you.consider.yourself.to.be.a.data.scientist.
## 125 Do.you.consider.yourself.to.be.a.data.scientist.
## 126 Do.you.consider.yourself.to.be.a.data.scientist.
## 127 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
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## 128 Do.you.consider.yourself.to.be.a.data.scientist.
## 129 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 130 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 131 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 132 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 133 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 134 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 135 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 136 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 137 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 138 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 139 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 140 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 141 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 142 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 143 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 144 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 145 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 146 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 147 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 148 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 149 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 150 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 151 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 152 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 153 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 154 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 155 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 156 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 157 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 158 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 159 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 160 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 161 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 162 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 163 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 164 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 165 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 166 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 167 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 168 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 169 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 170 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 171 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 172 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 173 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 174 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 175 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 176 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 177 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 178 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 179 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 180 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 181 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
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## 182 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 183 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 184 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 185 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 186 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 187 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 188 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 189 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 190 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 191 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 192 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 193 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 194 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 195 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 196 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 197 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 198 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 199 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 200 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 201 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 202 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 203 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 204 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 205 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 206 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 207 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 208 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 209 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 210 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 211 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 212 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 213 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 214 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 215 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 216 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 217 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 218 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 219 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 220 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 221 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 222 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 223 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 224 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 225 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 226 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 227 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 228 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 229 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 230 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 231 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 232 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 233 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 234 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 235 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
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## 236 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 237 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 238 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 239 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 240 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 241 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 242 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 243 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 244 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 245 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 246 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 247 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 248 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 249 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 250 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 251 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 252 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 253 Do.you.consider.yourself.to.be.a.data.scientist.
## 254 Do.you.consider.yourself.to.be.a.data.scientist.
## 255 Do.you.consider.yourself.to.be.a.data.scientist.
## 256 Do.you.consider.yourself.to.be.a.data.scientist.
## 257 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 258 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 259 Do.you.consider.yourself.to.be.a.data.scientist.
## 260 Do.you.consider.yourself.to.be.a.data.scientist.
## 261 Do.you.consider.yourself.to.be.a.data.scientist.
## 262 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 263 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 264 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 265 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 266 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 267 Do.you.consider.yourself.to.be.a.data.scientist.
## 268 Do.you.consider.yourself.to.be.a.data.scientist.
## 269 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 270 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 271 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 272 Do.you.consider.yourself.to.be.a.data.scientist.
## 273 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 274 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 275 Do.you.consider.yourself.to.be.a.data.scientist.
## 276 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 277 Do.you.consider.yourself.to.be.a.data.scientist.
## 278 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 279 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 280 Do.you.consider.yourself.to.be.a.data.scientist.
## 281 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 282 Do.you.consider.yourself.to.be.a.data.scientist.
## 283 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 284 Do.you.consider.yourself.to.be.a.data.scientist.
## 285 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 286 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 287 Do.you.consider.yourself.to.be.a.data.scientist.
## 288 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 289 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
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## 290 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 291 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 292 Do.you.consider.yourself.to.be.a.data.scientist.
## 293 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 294 Do.you.consider.yourself.to.be.a.data.scientist.
## 295 Do.you.consider.yourself.to.be.a.data.scientist.
## 296 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 297 Do.you.consider.yourself.to.be.a.data.scientist.
## 298 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 299 Do.you.consider.yourself.to.be.a.data.scientist.
## 300 Do.you.consider.yourself.to.be.a.data.scientist.
## 301 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 302 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 303 Do.you.consider.yourself.to.be.a.data.scientist.
## 304 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 305 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 306 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 307 Do.you.consider.yourself.to.be.a.data.scientist.
## 308 Do.you.consider.yourself.to.be.a.data.scientist.
## 309 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 310 Do.you.consider.yourself.to.be.a.data.scientist.
## 311 Do.you.consider.yourself.to.be.a.data.scientist.
## 312 Do.you.consider.yourself.to.be.a.data.scientist.
## 313 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 314 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 315 Do.you.consider.yourself.to.be.a.data.scientist.
## 316 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 317 Do.you.consider.yourself.to.be.a.data.scientist.
## 318 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 319 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 320 Do.you.consider.yourself.to.be.a.data.scientist.
## 321 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 322 Do.you.consider.yourself.to.be.a.data.scientist.
## 323 Do.you.consider.yourself.to.be.a.data.scientist.
## 324 Do.you.consider.yourself.to.be.a.data.scientist.
## 325 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 326 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 327 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 328 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 329 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 330 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 331 Do.you.consider.yourself.to.be.a.data.scientist.
## 332 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 333 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 334 Do.you.consider.yourself.to.be.a.data.scientist.
## 335 Do.you.consider.yourself.to.be.a.data.scientist.
## 336 Do.you.consider.yourself.to.be.a.data.scientist.
## 337 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 338 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 339 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 340 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 341 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 342 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 343 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
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## 344 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 345 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 346 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 347 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 348 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 349 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 350 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 351 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 352 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 353 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 354 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 355 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 356 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 357 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 358 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 359 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 360 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 361 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 362 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 363 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 364 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 365 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 366 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 367 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 368 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 369 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 370 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 371 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 372 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 373 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 374 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 375 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 376 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 377 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 378 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 379 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 380 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 381 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 382 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 383 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 384 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 385 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 386 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 387 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 388 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 389 Do.you.consider.yourself.to.be.a.data.scientist.
## 390 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 391 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 392 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 393 Do.you.consider.yourself.to.be.a.data.scientist.
## 394 Do.you.consider.yourself.to.be.a.data.scientist.
## 395 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 396 Do.you.consider.yourself.to.be.a.data.scientist.
## 397 Do.you.consider.yourself.to.be.a.data.scientist.
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## 398 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 399 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 400 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 401 Do.you.consider.yourself.to.be.a.data.scientist.
## 402 Do.you.consider.yourself.to.be.a.data.scientist.
## 403 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 404 Do.you.consider.yourself.to.be.a.data.scientist.
## 405 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 406 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 407 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 408 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 409 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 410 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 411 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 412 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 413 Do.you.consider.yourself.to.be.a.data.scientist.
## 414 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 415 Do.you.consider.yourself.to.be.a.data.scientist.
## 416 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 417 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 418 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 419 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 420 Do.you.consider.yourself.to.be.a.data.scientist.
## 421 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 422 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 423 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 424 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 425 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 426 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 427 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 428 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 429 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 430 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 431 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 432 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 433 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 434 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 435 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 436 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 437 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 438 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 439 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 440 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 441 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 442 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 443 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 444 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 445 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 446 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 447 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 448 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 449 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 450 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 451 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
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## 452 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 453 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 454 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 455 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 456 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 457 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 458 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 459 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 460 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 461 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 462 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 463 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 464 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 465 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 466 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 467 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 468 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 469 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 470 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 471 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 472 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 473 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 474 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 475 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 476 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 477 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 478 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 479 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 480 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 481 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 482 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 483 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 484 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 485 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 486 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 487 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 488 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 489 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 490 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 491 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 492 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 493 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 494 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 495 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 496 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 497 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 498 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 499 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 500 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 501 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
## 502 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 503 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 504 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 505 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
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## 506 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 507 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 508 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 509 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 510 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 511 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 512 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 513 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 514 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 515 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 516 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 517 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 518 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 519 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 520 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 521 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 522 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 523 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 524 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 525 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 526 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 527 Do.you.consider.yourself.to.be.a.data.scientist.
## 528 Do.you.consider.yourself.to.be.a.data.scientist.
## 529 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 530 Do.you.consider.yourself.to.be.a.data.scientist.
## 531 Do.you.consider.yourself.to.be.a.data.scientist.
## 532 Do.you.consider.yourself.to.be.a.data.scientist.
## 533 Do.you.consider.yourself.to.be.a.data.scientist.
## 534 Do.you.consider.yourself.to.be.a.data.scientist.
## 535 Do.you.consider.yourself.to.be.a.data.scientist.
## 536 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 537 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 538 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 539 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 540 Do.you.consider.yourself.to.be.a.data.scientist.
## 541 Do.you.consider.yourself.to.be.a.data.scientist.
## 542 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 543 Do.you.consider.yourself.to.be.a.data.scientist.
## 544 Do.you.consider.yourself.to.be.a.data.scientist.
## 545 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 546 Do.you.consider.yourself.to.be.a.data.scientist.
## 547 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 548 Do.you.consider.yourself.to.be.a.data.scientist.
## 549 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 550 Do.you.consider.yourself.to.be.a.data.scientist.
## 551 Do.you.consider.yourself.to.be.a.data.scientist.
## 552 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 553 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 554 Do.you.consider.yourself.to.be.a.data.scientist.
## 555 Do.you.consider.yourself.to.be.a.data.scientist.
## 556 Do.you.consider.yourself.to.be.a.data.scientist.
## 557 Do.you.consider.yourself.to.be.a.data.scientist.
## 558 Do.you.consider.yourself.to.be.a.data.scientist.
## 559 Do.you.consider.yourself.to.be.a.data.scientist.
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## 560 Do.you.consider.yourself.to.be.a.data.scientist.
## 561 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 562 Do.you.consider.yourself.to.be.a.data.scientist.
## 563 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 564 Do.you.consider.yourself.to.be.a.data.scientist.
## 565 Do.you.consider.yourself.to.be.a.data.scientist.
## 566 Do.you.consider.yourself.to.be.a.data.scientist.
## 567 Do.you.consider.yourself.to.be.a.data.scientist.
## 568 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 569 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 570 Do.you.consider.yourself.to.be.a.data.scientist.
## 571 Do.you.consider.yourself.to.be.a.data.scientist.
## 572 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 573 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 574 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 575 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 576 Do.you.consider.yourself.to.be.a.data.scientist.
## 577 Do.you.consider.yourself.to.be.a.data.scientist.
## 578 Do.you.consider.yourself.to.be.a.data.scientist.
## 579 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 580 Do.you.consider.yourself.to.be.a.data.scientist.
## 581 Do.you.consider.yourself.to.be.a.data.scientist.
## 582 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 583 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 584 Do.you.consider.yourself.to.be.a.data.scientist.
## 585 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 586 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 587 Do.you.consider.yourself.to.be.a.data.scientist.
## 588 Do.you.consider.yourself.to.be.a.data.scientist.
## 589 Do.you.consider.yourself.to.be.a.data.scientist.
## 590 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 591 Do.you.consider.yourself.to.be.a.data.scientist.
## 592 Do.you.consider.yourself.to.be.a.data.scientist.
## 593 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 594 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 595 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 596 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 597 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 598 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 599 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 600 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 601 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 602 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 603 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 604 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 605 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 606 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 607 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 608 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 609 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 610 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 611 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 612 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 613 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
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## 614 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 615 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 616 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 617 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 618 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 619 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 620 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 621 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 622 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 623 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 624 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 625 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 626 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 627 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 628 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 629 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 630 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 631 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 632 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 633 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 634 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 635 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 636 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 637 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 638 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 639 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 640 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 641 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 642 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 643 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 644 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 645 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 646 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 647 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 648 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 649 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 650 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 651 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 652 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 653 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 654 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 655 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 656 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 657 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 658 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 659 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 660 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
## 661 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 662 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 663 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 664 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 665 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 666 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 667 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
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## 668 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 669 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 670 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 671 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 672 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 673 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 674 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 675 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 676 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 677 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 678 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 679 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 680 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 681 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 682 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 683 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 684 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 685 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 686 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 687 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 688 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 689 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 690 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 691 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 692 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 693 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 694 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 695 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 696 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 697 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 698 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 699 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 700 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 701 Do.you.consider.yourself.to.be.a.data.scientist.
## 702 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 703 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 704 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 705 Do.you.consider.yourself.to.be.a.data.scientist.            Maybe
## 706 Do.you.consider.yourself.to.be.a.data.scientist.
## 707 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 708 Do.you.consider.yourself.to.be.a.data.scientist.
## 709 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 710 Do.you.consider.yourself.to.be.a.data.scientist.
## 711 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 712 Do.you.consider.yourself.to.be.a.data.scientist.     Probably yes
## 713 Do.you.consider.yourself.to.be.a.data.scientist.     Probably not
## 714 Do.you.consider.yourself.to.be.a.data.scientist.
## 715 Do.you.consider.yourself.to.be.a.data.scientist.
## 716 Do.you.consider.yourself.to.be.a.data.scientist.
## 717 Do.you.consider.yourself.to.be.a.data.scientist.
## 718 Do.you.consider.yourself.to.be.a.data.scientist.
## 719 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 720 Do.you.consider.yourself.to.be.a.data.scientist.
## 721 Do.you.consider.yourself.to.be.a.data.scientist.
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## 722 Do.you.consider.yourself.to.be.a.data.scientist.
## 723 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 724 Do.you.consider.yourself.to.be.a.data.scientist.
## 725 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 726 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 727 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 728 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 729 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 730 Do.you.consider.yourself.to.be.a.data.scientist.
## 731 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 732 Do.you.consider.yourself.to.be.a.data.scientist.
## 733 Do.you.consider.yourself.to.be.a.data.scientist.
## 734 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 735 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 736 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 737 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 738 Do.you.consider.yourself.to.be.a.data.scientist.
## 739 Do.you.consider.yourself.to.be.a.data.scientist.
## 740 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 741 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
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## 746 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 747 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 748 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 749 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 750 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 751 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 752 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 753 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 754 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
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## 756 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
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## 758 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 759 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 760 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 761 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 762 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 763 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
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## 769 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 770 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 771 Do.you.consider.yourself.to.be.a.data.scientist.         Maybe
## 772 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 773 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
## 774 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 775 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
```

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## 776 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 777 Do.you.consider.yourself.to.be.a.data.scientist. Definitely not
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## 779 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 780 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
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## 784 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 785 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 786 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 787 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 788 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 789 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 790 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 791 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 792 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 793 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 794 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 795 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
## 796 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
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## 799 Do.you.consider.yourself.to.be.a.data.scientist.    Probably yes
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## 803 Do.you.consider.yourself.to.be.a.data.scientist.
## 804 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 805 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
## 806 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
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## 808 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 809 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
## 810 Do.you.consider.yourself.to.be.a.data.scientist.    Probably not
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## 813 Do.you.consider.yourself.to.be.a.data.scientist.           Maybe
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```

```
## 830 Do.you.consider.yourself.to.be.a.data.scientist.          Maybe
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## 841 Do.you.consider.yourself.to.be.a.data.scientist.   Probably not
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## 843 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
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## 850 Do.you.consider.yourself.to.be.a.data.scientist. Definitely yes
## 851 Do.you.consider.yourself.to.be.a.data.scientist.   Probably yes
## 852 Do.you.consider.yourself.to.be.a.data.scientist.
```

```r
ds_num<-data_science %>%
  count(response)

ds_num
```

```
## # A tibble: 6 x 2
##   response            n
##   <chr>           <int>
## 1 ""                151
## 2 Definitely not     50
## 3 Definitely yes    182
## 4 Maybe             165
## 5 Probably not      105
## 6 Probably yes      199
```

```r
  ggplot(ds_num,aes(fct_reorder(response,n), y=n)) +
  geom_col()+
  coord_flip()
```
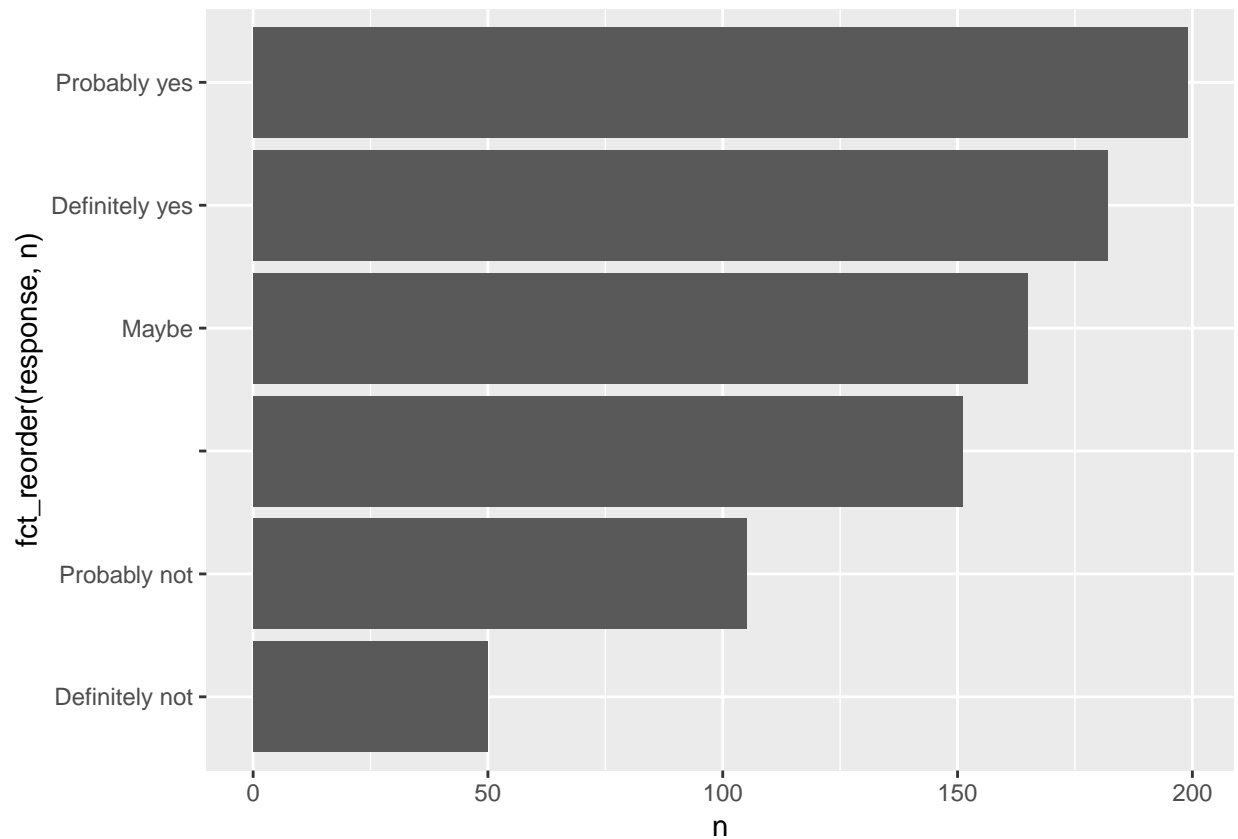
They are not totally considered a datascience as it shows on the graph.

```
platform<-min_country%>%
  select("On.which.online.platform.have.you.spent.the.most.amount.of.time....Selected.Choice")%>%
  rename("platform"=On.which.online.platform.have.you.spent.the.most.amount.of.time....Selected.Choice)
  count(platform)
```

platform

```
## # A tibble: 13 x 2
##    platform                   n
##    <fct>                  <int>
##  1 ""                       491
##  2 Coursera                  94
##  3 DataCamp                  65
##  4 DataQuest                  6
##  5 developers.google.com      2
##  6 edX                       52
##  7 Fast.AI                    7
##  8 Kaggle Learn              25
##  9 Online University Courses  6
## 10 Other                      8
## 11 TheSchool.AI               1
## 12 Udacity                   37
## 13 Udemy                     58
```

```
platform %>%
  ggplot(aes(fct_reorder(platform,n),n))+
  geom_col()+
  coord_flip()
```
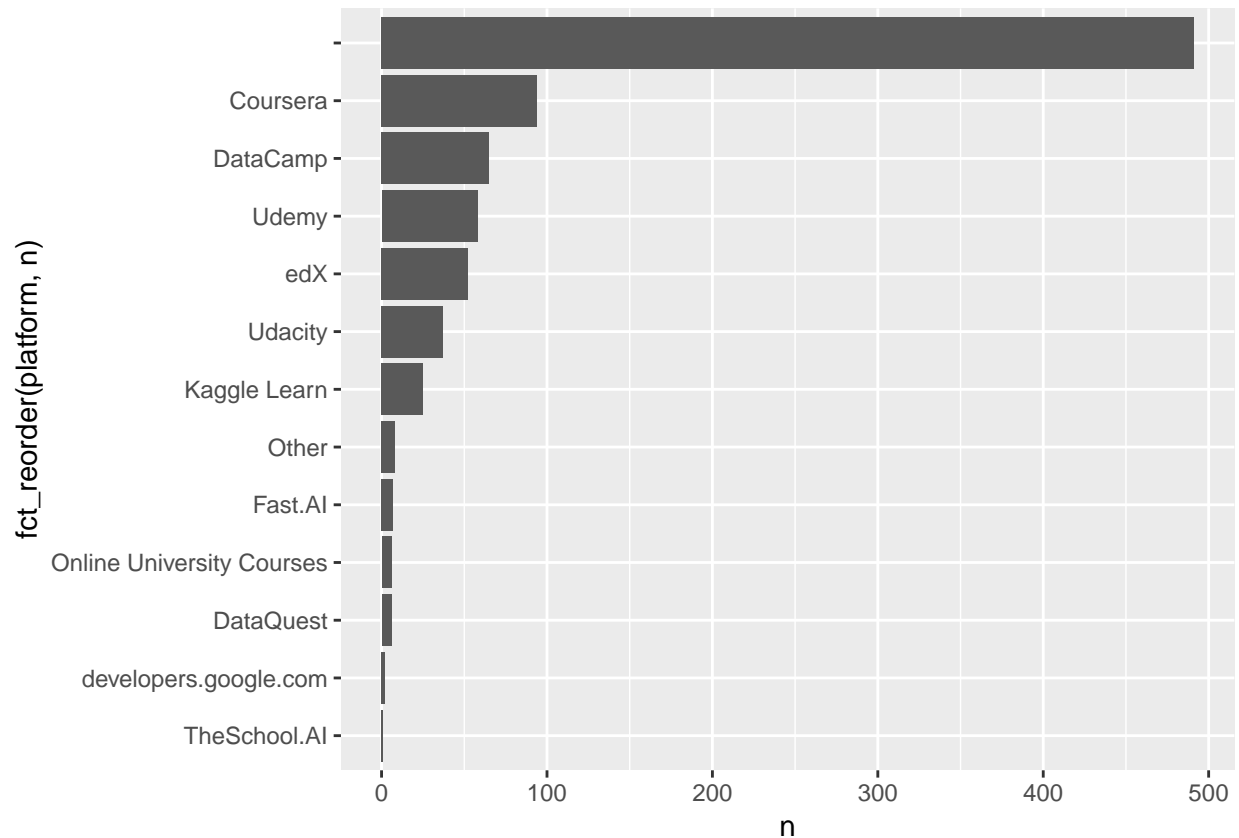

Coursera top the course used to get training about big data and machine learning.

```
comp<-min_country%>%
  select(What.is.your.current.yearly.compensation..approximate..USD..)%>%
  rename("Compensation"=What.is.your.current.yearly.compensation..approximate..USD..)%>%
  count(Compensation)
comp
```

```
## # A tibble: 18 x 2
##    Compensation                                                          n
##    <fct>                                                             <int>
##  1 ""                                                                  119
##  2 0-10,000                                                            304
##  3 10-20,000                                                            97
##  4 100-125,000                                                           6
##  5 125-150,000                                                           4
##  6 20-30,000                                                            47
##  7 250-300,000                                                           1
##  8 30-40,000                                                            38
##  9 300-400,000                                                           1
## 10 40-50,000                                                            23
## 11 400-500,000                                                           1
```

```
## 12 50-60,000                                                        19
## 13 500,000+                                                          4
## 14 60-70,000                                                        14
## 15 70-80,000                                                         6
## 16 80-90,000                                                         4
## 17 90-100,000                                                        7
## 18 I do not wish to disclose my approximate yearly compensation    157
```

```
comp%>%
  ggplot(aes(fct_reorder(Compensation,n),n))+
  geom_col()+
  coord_flip()
```
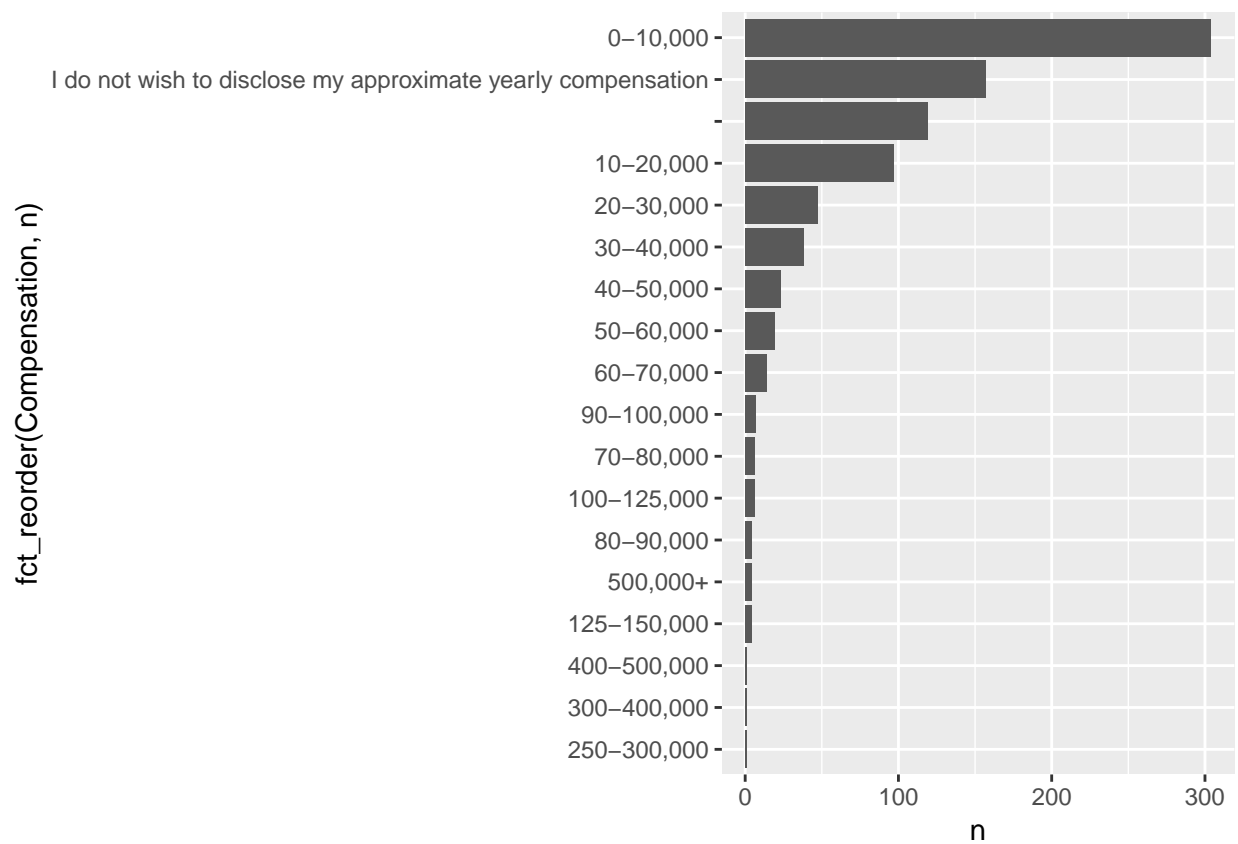

It makes sense that those people do not get paid a lot to do the data science job comparely to developed countries like USA.

```
gender<-min_country%>%
  select(What.is.your.gender....Selected.Choice)%>%
  rename("gender"=What.is.your.gender....Selected.Choice)%>%
  count(gender)
gender
```

```
## # A tibble: 4 x 2
##   gender                 n
##   <fct>              <int>
## 1 Female               157
## 2 Male                 687
## 3 Prefer not to say      6
```

```
## 4 Prefer to self-describe    2
```
```
gender%>%
  ggplot(aes(fct_reorder(gender,n),n))+
  geom_col()
```
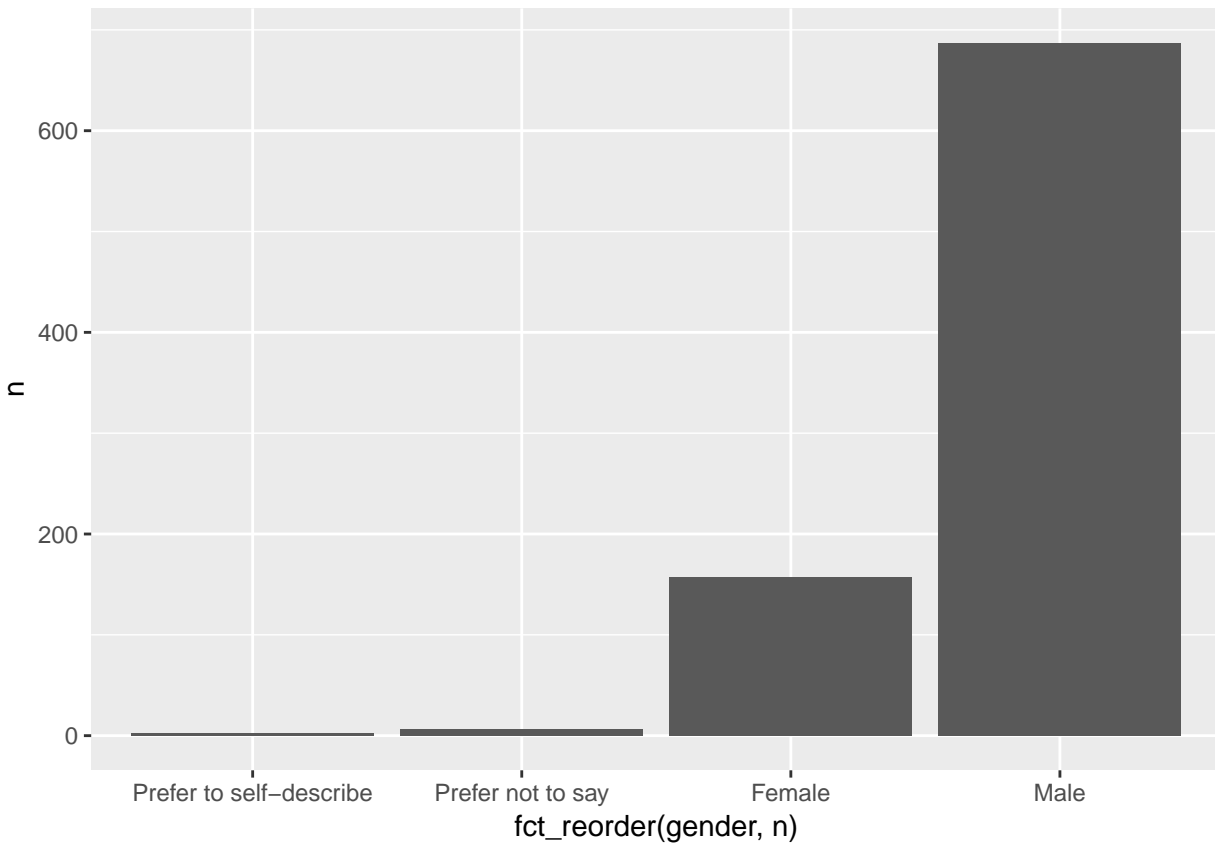

Data science is a Male carreer in the selected countries.

Conclusion

-After studying the dataset of 5 countries we arrive at those conclusion. Most of the respondents are male and are not making enough money comparatively to other countries. They use the same tool as all data science around the world. Python and R are the programming languages they use most often. Also they avidly use coursera to learn more about data science. Eventhough they use the same tools as other countries they definitely not believe they are data scientist.
During this study I use the tidyverse package and I discover purrr and stringr packages. The use of pipe in the tidyverse package makes the code more readable and you can combine multiple statement to get to a particular result.

Certainly our study is limited. We could discover more insight with the dataset. In the future we can look at the concerns of different groups in the datascience domain.