

## Uber Data Analysis project Report

Academic year: Fall 2021-2022

Under the guidence of: Prof. S.Gopikrishna

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#### Summary:

The working of an Uber dataset includes primary

Data on Uber pickups with details including the date, time of the ride as well as longitude-latitude information. Uber data analysis project, data storytelling is an important component of Machine Learning through which companies are able to understand the background of various operations. With the help of visualization, companies can avail the benefit of understanding the complex data and gain insights that would help them to craft decisions. The interesting insights that can be derived from a detailed analysis of the dataset. The ggplot2 on the Uber Pickups dataset and at the end, master the art of data visualization in R.the dataset and to know the effect of each field on price with every other field of the dataset. Then The objective is to first explore hidden or previously unknown information by applying exploratory data analytic on y different R models to complete the analysis. The number of pickups is more during weekends. To alleviate the dynamic price surge, we need to manage the 'supply and demand' of cabs through these events of high demand situations. Based on these results, we can expect that the demand will be high as the temperature drops or after business hours or on weekends, so that: As a Customer: We can plan our trips in advance to avoid paying extra money because of this dynamic price surge. As an Uber Driver: We can maximize profits by choosing to go on trips when these situations occur.

#### Introduction:

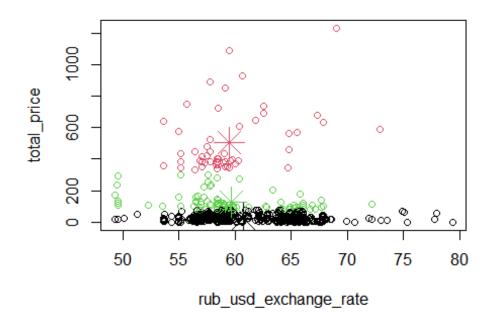
Uber launched in NYC in May of 2011, the first city outside of

its San Francisco headquarters. NYC is probably the largest and most lucrative rideshare market in the world, with a total demand (for taxis and for-hire vehicles) in 2017 of more than 240 million trips per year. The number of Uber trips per day in NYC is still growing significantly. In 2017 so far, this number has often surpassed 200,000, but the plot below shows that by mid-2015 it was hovering around 120,000. The data also allows us to visualize other interesting trends over time. In the bar charts below, we can see that the demand for Uber is higher . Saturday has the highest demand. Interestingly, Sunday shows a level of demand similar to Wednesday, which is higher than Monday or Tuesday. When looking at the total demand per month along the period of time analyzed, seasonal effects are masked by the consistent month-to-month growth.

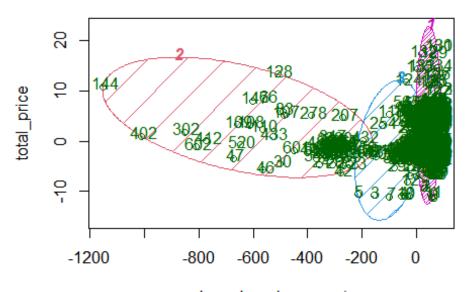
#### DATA ANALYST:

```
library(readr)
uber <- read_csv("C:/Users/siva kumar/Downloads/uber-rides-dataset- updated.csv")</pre>
## Rows: 678 Columns: 37
       Column specification
## Delimiter: "."
## chr (20): trip status, trip uid, driver uid, rider uid, customer, trip star...
## dbl (12): pickup_lat, pickup_long, dropoff_lat, dropoff_long,
rub_usd_excha...
## dttm (2): trip_completed_at, temperature_time ##
           (3): trip_time, total_time, wait_time
time
##
## i Use `spec()` to retrieve the full column specification for this data. ## i Specify
the column types or set `show_col_types = FALSE` to quiet this message.
df \leftarrow uber[,c(7:19,22,24:37)]
# clusterring
library(gtools)
library(ClusterR)
library(cluster)
library(ggplot2)
ClusterFunction <- function(clusterDF){
  kmeans.re <- kmeans(clusterDF, centers = 3)
  plot(clusterDF[c(1,2)], col = kmeans.re$cluster)
  points(kmeans.re\color{}centers, \color{}col = 1:3, \color{}pch = 8, \color{}cex = 3)
  y_kmeans <- kmeans.re$cluster clusplot(clusterDF[,c(1,2)],
             y_kmeans, lines
             = 0, shade =
             TRUE, color =
              TRUE, labels =
              2,
```

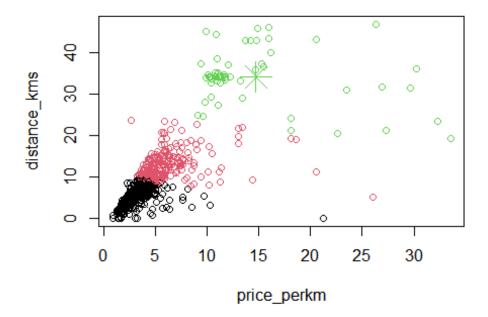
```
plotchar = FALSE,
    span = TRUE,
    main = paste("Cluster iris"), xlab =
    'rub_usd_exchange_rate', ylab =
    'total_price')
}
# clustering Prize
ClusterFunction(df[,c(17,18)])
```



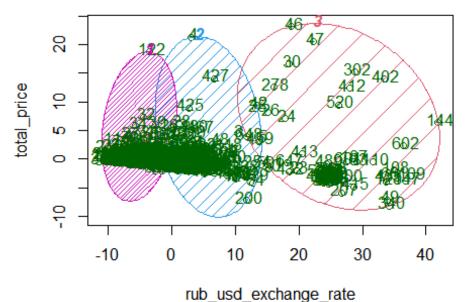
#### Cluster iris



rub\_usd\_exchange\_rate
These two components explain 100 % of the point variabilit



#### **Cluster iris**



These two components explain 100 % of the point variabilit

```
# Hierarchical clustering

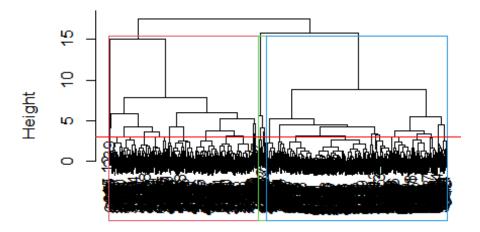
Hcluster <- df[,c(22,24:26)]

distance_mat <- dist(Hcluster, method = 'euclidean')
```

```
## Warning in dist(Hcluster, method = "euclidean"): NAs introduced by coercion
Hierar_cl <- hclust(distance_mat, method = "average")
Hierar_cl
##
## Call:
## hclust(d = distance_mat, method = "average") ##
## Cluster method : average ##
Distance : euclidean ## Number
of objects: 678

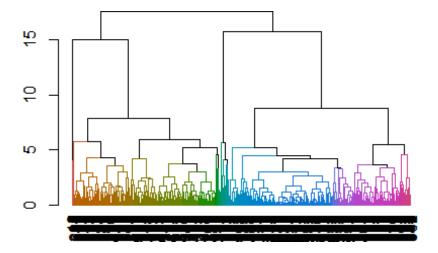
cut_avg <- cutree(Hierar_cl, k = 3)
plot(Hierar_cl)
rect.hclust(Hierar_cl , k = 3, border = 2:6) abline(h = 3, col = 'red')</pre>
```

#### Cluster Dendrogram



distance\_mat hclust (\*, "average")

```
suppressPackageStartupMessages(library(dendextend))
## Warning: package 'dendextend' was built under R version 4.1.2 avg_dend_obj <-
as.dendrogram(Hierar_cl)
avg_col_dend <- color_branches(avg_dend_obj, h = 3) plot(avg_col_dend)
```



## Data Scientist:

## Dataset:

	Α	В	С	D		E	F	G	Н			K		M	N	0	Р	Q	R	S	Т
1	trip comple			driver uid	l ride	er uid	customer	trip start ti		trin time	total time		vahicla mal								trip map in trip
2			ee89076fd9			_		#########		0:21:33	0:29:00		Ford Focus		Ford	Male					[ANONYMIZ [AI
3			518be51d40				-	***********		0:19:27	0:26:00		Hvundai Sol		Hyundai	Male					[ANONYMIZ [AI
4			6e460cc8a1					13-05-2015		1:06:53	1:23:00		Renault Flue		Renault	Male					[ANONYMIZ [AI
5			49613a86a0					16-05-2015		0:13:37	0:20:00		Mercedes-B		Mercedes-E						[ANONYMIZ [AI
6			9896148fde					16-05-2015		0:38:54	0:49:00		Hyundai Sol		Hvundai	Male		30.308553			[ANONYMIZ [AI
7			5c0312a92f					18-05-2015		0:16:38	0:34:00		Hyundai Sol		Hyundai	Male	59.925603				[ANONYMIZ [AI
8			4ad2e95481					18-05-2015	18-05-2015	0:40:24	0:44:00		Volkswagen		Volkswager	Male	59.9287				[ANONYMIZ[AI
9			1e3935b05a					19-05-2015		0:41:56	0:58:00			Muhamme		Male	60.031592				[ANONYMIZ[AI
10	**********	Completed	0eb9a9f7a3	75a4c47c	32 3ff	a4a71a5	stantvan	19-05-2015	19-05-2015	0:10:06	0:15:00	0:04:54	Hvundai ix3	Vladimir	Hyundai	Male	59.945143	30.356079	59.929122	30.388656	[ANONYMIZ[AI
11	**********	Completed	b56495d149	176f50c4	24 3ff	a4a71a5	stantyan	19-05-2015	19-05-2015	0:25:30	0:33:00	0:07:30	Volkswagen	Roman	Volkswager	Male	59.92865	30.388166	60.031366	30.329493	[ANONYMIZ [AI
12	**********	Completed	613f3deb51	e5162339	97 3ffa	a4a71a5	stantyan	20-05-2015	20-05-2015	0:17:47	0:26:00	0:08:13	Hyundai Sol	Aleksey	Hyundai	Male	59.925556	30.321134	59.929301	30.388775	[ANONYMIZ [AI
13	***********	Completed	0d486aced5	a8195245	8c 3ffa	a4a71a5	stantyan	31-05-2015	31-05-2015	0:14:28	0:27:00	0:12:32	Hyundai Sol	Ekaterina	Hyundai	Female	56.752253	60.805972	56.794567	60.614053	[ANONYMIZ [AI
14	***************************************	Completed	d12da2c7ae	f065223fa	8 3ff	a4a71a5	stantyan	******	*********	0:15:19	0:28:00	0:12:41	Ford Monde	Oleg	Ford	Male	56.751753	60.803867	56.796019	60.614159	[ANONYMIZ [AI
15	***********	Completed	36695e9088	b897afbe	68 3ffa	a4a71a5	stantyan	**********	*********	0:50:13	1:04:00	0:13:47	Ford Focus	Aleksandr	Ford	Male	56.795387	60.612997	56.857545	60.6063	[ANONYMIZ [AI
16	**********	Completed	30bd4a26ca	ef33153fb	oc 3ff	a4a71a5	stantyan	*********	*********	0:12:39	0:37:00	0:24:21	Hyundai Sol	Sergey	Hyundai	Male	56.857754	60.606077	56.857726	60.606094	[ANONYMIZ [AI
17	**********	Completed	3e95596617	b6584dd0	94 3ffa	a4a71a5	stantyan	**********	*********	0:16:18	0:34:00	0:17:42	Kia Rio	Aleksey	Kia	Male	56.795207	60.612907	56.857543	60.606187	[ANONYMIZ [AI
18	**********	Completed	4669e3d964	c8508678	1a 3ffa	a4a71a5	stantyan	******	******	0:11:27	0:25:00	0:13:33	Nissan Alme	Andrey	Nissan	Male	56.795483	60.612903	56.8283	60.597542	[ANONYMIZ [AI
19	*********	Completed	a7e321acb3	d505ef8cl	b3 3ffa	a4a71a5	stantyan	**********	******	0:16:39	0:30:00	0:13:21	Kia Rio	Ekaterina	Kia	Female	56.795296	60.612885	56.817396	60.634999	[ANONYMIZ [AI
20	**********	Completed	8e9c9603d9	97e28e41	c9 3ffa	a4a71a5	stantyan	******	******	0:16:28	0:27:00		Hyundai Sol		Hyundai	Male	56.795367	60.614292	56.750943	60.801553	[ANONYMIZ [AI
21	**********	Completed	e01e7067e5	767a9c87	d4 3ffa	a4a71a5	stantyan	******	******	0:14:13	0:17:00		Hyundai Sol		Hyundai	Male	59.925502	30.339049	59.948717	30.303298	[ANONYMIZ [AI
22	#########	Completed	c9df3a9edb	151944a8	f9 3ffa	a4a71a5	stantyan	**********	*****	0:21:12	0:36:00	0:14:48	Chevrolet C	Oleg	Chevrolet	Male	59.951232	30.310537	60.011847	30.434048	[ANONYMIZ [AI
23	#########	Cancelled	b970e99cf7	a89bc69e	84 3ffa	a4a71a5	stantyan	14-06-2015	14-06-2015	0:01:00	0:46:00	0:45:00	Mercedes-B	Pavel	Mercedes-E	Male	59.799903	30.273236	59.799903	30.273236	[ANONYMIZ [AI
24			945269c950					14-06-2015	14-06-2015	0:45:40	0:54:00	0:08:20	Kia Cee'd	Maksim	Kia	Male	59.929035	30.356715	60.056114	30.427891	[ANONYMIZ [AI
25	*********	Completed	04f14fe72a	6b3642ae	75 3ffa	a4a71a5	stantyan	14-06-2015	14-06-2015	0:30:44	0:40:00	0:09:16	Mitsubishi A	Sergey	Mitsubishi	Male	60.016182	30.409457	60.02793	30.634919	[ANONYMIZ [AI
26			fdbd229175					14-06-2015	14-06-2015	0:25:18	0:30:00		Nissan Alme		Nissan	Male	59.927837				[ANONYMIZ [AI
27			d4984dfe40					14-06-2015	14-06-2015	0:30:18	0:37:00		Honda Civic			Male	59.927697		59.927216		[ANONYMIZ [AI
28			57bd0828f1				-	14-06-2015	14-06-2015	0:09:33	0:19:00		Mercedes-B	Gennadiy	Mercedes-E		59.927608				[ANONYMIZ [AI
29			268145a88a				-	14-06-2015		0:22:31	0:29:00	0:06:29		Ramil	Audi	Male	59.932907				[ANONYMIZ [AI
30			9622fd4e18					15-06-2015		0:45:00	0:57:00		Mitsubishi C		Mitsubishi		60.01593				[ANONYMIZ [AI
31			72801dd197				-	15-06-2015		1:08:04	1:28:00	0:19:56		Kryuchkov	Kia	Male					[ANONYMIZ [AI
27			f27Af0ssdAi		8r 3ff:	≥127125	ctantian	15_06_2015	15_06_2015	0-13-38	0.27.00	0.14-23	RMM 5-cori		RMM	Mala	50 077516	3U 338UE3	50 019769	20 285588	IVI SIMANIUUNVI
14		er-rides-datase	t-updated =											•		- 111					,
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41			cb06523d18	D	264 - 4 - 74		G 16-06-2015	H	0:07:30	0:21:00	K	BMW 5-ser		BMW	Female	59.943622	Q 20.22664	R 59.927673	30 22700	[ANONYMI	
			94ff538a9d					17-06-2015	0:07:30	0:21:00		Opel Astra		Opel	Female			59.927643			
			94115388900 9e4c25f004					17-06-2015	0:10:20	0:22:00		Ford Focus	-	Ford	Male			59.927643			
			ad25b01455					17-06-2015	0:31:09	0:38:00		Kia Optima		Kia	Male			59.800281			
			03210d1c2a					17-06-2015	0:28:17	0:30:00	0:01:43		Andrey	Audi	Male						-
			e912743c9a					17-06-2015	0:29:50	0:45:00		Citroen C4		Citroen	Male			59.927962 59.928041			
			f981dcaa5c				17-06-2015		0:11:39	0:27:00		Mercedes-E		Mercedes-F				59.800026			
			910b27c47f					29-06-2015	0:48:13	0:46:00		Mercedes-		Mercedes-E				59.800026		[ANONYMI	
			e4004a6b46				#########		1:02:01	1:17:00		Chevrolet C			Male			60.015673			
			e4004a6b46 e49979ce97				***********		0:37:41	0:45:00		Ford Focus		Ford	Male	60.016093		59.842317			
			4d92ff7d2e				#########		0:42:26	0:55:00		Honda CR-\		Honda	Male		30,409194		30.319143		
			0697b6dd10				**********		0:05:24	0:08:00		Hyundai So		Hyundai	Male		30.388899		30.407802		
			54b6a258d6				**********		0:03:24	2:35:00		Hyundai So		Hyundai	Male			56.842798			
			2a545858dc				#########		0:13:29	0:33:00		Suzuki Swift		Suzuki	Male			56.795247			-
			2bf08f36d2				***************************************		0:30:25	0:42:00			Konstantin		Male			56.754579			
			a66a7fde34				************		0:24:35	0:25:00				Volkswager				56.794925			
			1ab9e6f3cb				**********		0:11:27	0:19:00		Hyundai Sol		Hyundai	Male			56.827389			
			328a7ed093				***************************************		0:12:23	0:28:00			Konstantin		Male			56.795447			
			2f4b8c68a2				***********	**********	0:14:53	0:24:00	0:09:07	Renault Du	Mihail	Renault	Male			56,795337			
			444819db0c				***************************************	***********	0:15:37	0:31:00		Mazda MAZ		Mazda	Male			56.843381			
			Offfa07abb8				***********	********	0:15:41	0:22:00		Volkswager		Volkswager				56.842877			
62	***********	Completed	87539006f2	51d2fca895	3ffa4a71	La5 stantvan	**********	**********	0:13:52	0:18:00	0:04:08	Peugeot 20	Danil	Peugeot	Male	56.837945	60.600501	56,796989	60.614437	IANONYMI	IONA
63	***********	Completed	7590c2e055	8ddd6d1fc2	3ffa4a71	La5 stantvan	13-09-2015	13-09-2015	0:18:46	0:26:00		Dacia Duste		Dacia	Male	60.015903	30.409211	60.004901	30.299059	[ANONYMI	IONA
64	**********	Completed	15aaea4b6€	c61a6ab054	3ffa4a71	La5 stantyan	13-09-2015	13-09-2015	0:20:01	0:28:00	0:07:59	Hyundai So	Igor	Hyundai	Male	60.004807	30.299834	60.016069	30.409218	[ANONYMI	[ANON]
65	**********	Completed	4e1c92354€	672e11ff3f2	3ffa4a71	La5 stantyan	13-09-2015	13-09-2015	0:13:00	0:35:00	0:22:00	Chrysler Vo	Nikolay	Chrysler	Male	56.795383	60.611239	56.750034	60.802219	[ANONYMI	[ANON]
66	*********	Completed	cd2550e2ffl	c02023222f	3ffa4a71	La5 stantyan	13-09-2015	13-09-2015	0:29:37	2:48:00	2:18:23	Renault Ne	Vladimir	Renault	Male	56.750988	60.799555	56.829888	60.56663	[ANONYMI	[ANON
67	*********	Completed	c21b0a0c97	0927f61a3f	3ffa4a71	La5 stantyan	13-09-2015	13-09-2015	0:32:39	0:39:00	0:06:21	Nissan X-Tr	Vyacheslav	Nissan	Male	59.79903	30.273573	60.0161	30.409211	[ANONYMI	[ANON
68	*********	Completed	5f930c5aa9	c9f2a70459	3ffa4a71	La5 stantyan	14-09-2015	14-09-2015	0:16:01	0:27:00	0:10:59	Renault Me	Sergey	Renault	Male	60.013617	30.395937	60.03538	30.441083	[ANONYMI	[ANON
69	**********	Completed	c967cf6ce2	ddb3e70a1e	3ffa4a71	La5 stantyan	16-09-2015	16-09-2015	0:07:45	0:19:00	0:11:15	Hyundai So	Andrey	Hyundai	Male	60.016136	30.409377	60.033	30.367926	[ANONYMI	[ANON
70	**********	Completed	ea8a5c5086	166cfe40ae	3ffa4a71	La5 stantyan	16-09-2015	16-09-2015	0:11:27	0:14:00	0:02:33	Mazda MAZ	Ilya	Mazda	Male	60.033322	30.366692	60.016172	30.409271	[ANONYMI	[ANON
71	************	Completed	bfbadc7fa14	83a10afa3b	3ffa4a71	La5 stantyan	17-09-2015	17-09-2015	0:10:47	0:18:00	0:07:13	BMW 7-ser	Konstantin	BMW	Male	60.015875	30.409196	60.01354	30.392946	[ANONYMI	[ANON
72	*********	Completed	N5ff0927f2r	h562a7c6a8	2ff=1=71	la5 ctantian	17_00_2015	17_00_2015	0-20-05	0-45-00	0.15.55	Onal Actra	Alakcandr	Onel	Mala	60.016183	20 400267	50 071127	20 258715	IMVINONAL	TANON T
14 4	→ → ube	er-rides-datase	t-updated +												111						<b>&gt;</b>

	A1 A	~ × •	/ fx Oleg	G H	1	J	K L M	N O	P	Q	R	S	т
	*****	Completed	51785bfdf5 730fbb4bf8 3ffa4a71a5 stantyan	23-09-2015 23-09-2015	0:53:13	1:00:00	0:06:47 Mitsubishi L Roman	Mitsubishi Male	60.016037	30.409295	59.934462	30.332792 [	ANONYMIZ [AN
			f162b9735f 8377b615fd 3ffa4a71a5; stantyan 920b887efe 77b9a7fbfc; 3ffa4a71a5; stantyan	23-09-2015 23-09-2015 23-09-2015 23-09-2015	0:22:18	0:34:00	0:11:42 Volkswagen Aleksey 0:06:27 Chevrolet C Oleg	Volkswagen Male Chevrolet Male	60.016139 3 60.034757 3				ANONYMIZ [AN ANONYMIZ [AN
			b40cb7dc34 be257214ec 3ffa4a71a5 stantyan	25-09-2015 25-09-2015	0:41:32	0:52:00	0:10:28 Hyundai Sol Evgeniy	Hyundai Male					ANONYMIZ [AN
			83fb008944 2e0ecf0655 3ffa4a71a5 stantyan dc564226et 0a66f0b182 3ffa4a71a5 stantyan	26-09-2015 26-09-2015 26-09-2015 26-09-2015	0:06:44	0:18:00 0:34:00	0:11:16 Hyundai Sol Gennadiy 0:17:56 Audi A6 Andrey	Hyundai Male Audi Male					ANONYMIZ (AN ANONYMIZ (AN
			cbaccf2e9b bd870aa56c3ffa4a71a5 stantyan	26-09-2015 26-09-2015	0:10:24	0:21:00	0:10:36 Skoda Octav Albert	Skoda Male					ANONYMIZ [AN
			8483ac3020 ef33153fbc 3ffa4a71a5 stantyan 8c4de3cc84 95a0a7bfed 3ffa4a71a5 stantyan	26-09-2015 26-09-2015 26-09-2015 26-09-2015	0:17:39 0:17:34	0:28:00 0:21:00	0:10:21 Opel Astra Sergey 0:03:26 Hyundai Sol Mihail	Opel Male Hyundai Male					1A] SIMYNONA 1A] SIMYNONA
			db7b80965c1f49c09d583ffa4a71a5 stantyan	27-09-2015 27-09-2015	0:17:29	0:29:00	0:11:31 Toyota RAV Arkadiy	Toyota Male	60.016068				ANONYMIZ [AN
			daba5c623t 2c9a3f60a0 3ffa4a71a5 stantyan 037a51252ca65ad3cce5 3ffa4a71a5 stantyan	27-09-2015 27-09-2015 27-09-2015 27-09-2015	0:23:19 0:10:41	0:30:00	0:06:41 Kia Cee'd Sp Maksim 0:09:19 Hyundai Sol Oleg	Kia Male Hyundai Male	59.957712 3 60.016175 3				1A] SIMYNONA 1A] SIMYNONA
			6b4c37de57 161951a22e 3ffa4a71a5 stantyan e73e9ef378 5edf276511 3ffa4a71a5 stantyan	27-09-2015 27-09-2015	0:11:24	0:21:00	0:09:36 Lifan Solanc Ivan	Lifan Male					ANONYMIZ [AN
			b920a8c91( 290770264( 3ffa4a71a5 stantyan	28-09-2015 28-09-2015 28-09-2015 28-09-2015	0:05:42 0:10:55	0:19:00	0:13:18 Saturn Astra Vadim 0:08:05 Volkswagen Aleksandr	Saturn Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
			e0578dcecf 1031ddfed1 3ffa4a71a5 stantyan	28-09-2015 28-09-2015	0:05:49	0:09:00	0:03:11 Mazda MAZ Pavel	Mazda Male	60.0148	30.389778	60.016178	30.409392 [	ANONYMIZ [AI
			62a6b43eac 81ca2b70b6 3ffa4a71a5 stantyan 300357121f 7744054062 3ffa4a71a5 stantyan	29-09-2015 29-09-2015 29-09-2015 29-09-2015	0:32:15 0:25:52	0:44:00	0:11:45 Chevrolet L Vladimir 0:10:08 Nissan Alme Oleg	Chevrolet Male Nissan Male					1A] SIMYNONA 1A] SIMYNONA
			8bbd296ccf 4093ae4a2e3ffa4a71a5 stantyan	29-09-2015 29-09-2015	0:16:44	0:30:00	0:13:16 Hyundai Sol Pavel	Hyundai Male					ANONYMIZ [AI
			628e670f26 ca9d5dd796 3ffa4a71a5 stantyan e65ae2777t ca9d5dd796 3ffa4a71a5 stantyan	29-09-2015 29-09-2015 29-09-2015 29-09-2015	0:22:06	0:35:00	0:12:54 Toyota Corc Aleksandr 0:08:39 Hyundai Sol Aleksandr	Toyota Male Hyundai Male					ANONYMIZ [AI ANONYMIZ [AI
#	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	563cd1f3e0 dbcb06a53c 3ffa4a71a5 stantyan	30-09-2015 30-09-2015	0:23:53	0:32:00	0:08:07 Volkswagen Evgeniy	Volkswagen Male	60.016165	30.409247	60.053023	30.331417 [	ANONYMIZ [AI
			fd7a0b1815 05cfeb269e 3ffa4a71a5 stantyan 0ee6644101 21444fa76d 3ffa4a71a5 stantyan	30-09-2015 30-09-2015 ####################################	0:14:20 0:34:17	0:19:00	0:04:40 Kia Rio Maksim 0:06:43 Volkswagen Dmitriy	Kia Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
#	,,,,,,,,,,,	Completed	864c3cefc0 89de0fed4e 3ffa4a71a5 stantyan	**********	0:02:56	0:12:00	0:09:04 Renault Me Vladimir	Renault Male	59.986561	30.221763	59.987892	30.205385 [	ANONYMIZ [AN
			61c4f1b767 20db81eb8t 3ffa4a71a5 stantyan 52091a0c3a c24e3efee4 3ffa4a71a5 stantyan	***************************************	0:33:31	0:38:00	0:04:29 Ford Focus Ilya 0:09:58 Volkswagen Dmitriy	Ford Male Volkswagen Male	59.987967 3 59.949837 3				ANONYMIZ [AI ANONYMIZ [AI
#	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	176e430aa7c24e3efee4 3ffa4a71a5 stantyan	**********	0:51:03	0:57:00	0:05:57 Hyundai Sol Dmitriy	Hyundai Male	60.016196	30.409362	59.799367	30.274014 [	ANONYMIZ [AN
			06dd318a85580a78c6e53ffa4a71a5stantyan 22f1e9c3846410050a353ffa4a71a5stantyan	20-10-2015 20-10-2015 20-10-2015 20-10-2015	0:38:03 1:25:19	0:47:00 1:43:00	0:08:57 Hyundai Sor Sergey 0:17:41 Audi Q3 Andrey	Hyundai Male Audi Male					1A] SIMYNONA 1A] SIMYNONA
#	,,,,,,,,,,,,	Completed	9838c1db783c07b4aa633ffa4a71a5stantyan	25-10-2015 25-10-2015	0:38:12	0:46:00	0:07:48 Kia Rio Andrey	Kia Male	59.802778	30.32294	60.016218	30.409376 [	ANONYMIZ [AN
>	• ▶ ub	er-rides-datase	t-updated +	26_10_2015 26_10_2015	0.04-12	0-13-00	0-08-48 Ford Focus Arkadiv	Ford Male	50 03/1019	267065	50 07007/	30 356443 1	VIOUNAMULUV
1	12 = Q		<b>₩ \$\text{WPS Cloud}</b> × <b>*</b> uber-rides-dataset-updated	l.csv* × +								■ < sh	are Q Find fe
	K96 A	- @	C D E F	G H	1	J	K L M	N O	Р	Q	R	S	Т
		Completed	736ad0b2538c75b2fbca 3ffa4a71a5 stantyan	**********	0:34:42	0:41:00	0:06:18 Hyundai Sol Evgeniy	Hyundai Male		30.35402	60.016186		ANONYMIZ [AI
			2be85cdd9e093b9e29a93ffa4a71a5stantyan 6ea41ffb888e78bc6f873ffa4a71a5stantyan	######################################	0:10:10	0:20:00	0:09:50 Hyundai Sol Maksim 0:12:51 Ford Kuga Evgeniy	Hyundai Male Ford Male					ANONYMIZ [AI ANONYMIZ [AI
#	,,,,,,,,,,,,	Cancelled	7fc047ee4a 164cdace27 3ffa4a71a5 stantyan	26-12-2015 26-12-2015	0:01:00	0:22:00	0:21:00 Lifan Solanc Ilya	Lifan Male	59.932816	30.348415	59.932816	30.348415 [	ANONYMIZ [AI
			797457d1aa 4b3883a81c 3ffa4a71a5 stantyan 27199df0fb 1f57db561a 3ffa4a71a5 stantyan	29-12-2015 29-12-2015 29-12-2015 29-12-2015	0:25:31	0:32:00	0:06:29 Volkswagen Murad 0:09:30 Hyundai Sol Aleksey	Volkswagen Male Hyundai Male					ANONYMIZ [AI ANONYMIZ [AI
##	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	f7a7e398ba 8de42f01ee 3ffa4a71a5 stantyan	30-12-2015 30-12-2015	0:11:31	0:27:00	0:15:29 Ford Focus Dmitriy	Ford Male	56.85777 6	50.606151	56.830217	60.567692 [	ANONYMIZ [AI
			e5a9803b45 cc78656ac2 3ffa4a71a5 stantyan 4aecc5df22 23351ce1b8 3ffa4a71a5 stantyan	***********	0:13:15	0:20:00	0:06:45 Chevrolet L. Vladimir 0:08:26 Volkswagen Igor	Chevrolet Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
#	,,,,,,,,,,,,	Completed	fd82a418a4 bbd80a462c 3ffa4a71a5 stantyan	16-01-2016 16-01-2016	0:18:38	0:32:00	0:13:22 Lifan Solanc Evgeniy	Lifan Male	59.98653	30.354448	60.016223	30.409012 [	ANONYMIZ [AN
			4666623a85 6e9a080f2b 3ffa4a71a5 stantyan 9c8a553a7e 544477de1l 3ffa4a71a5 stantyan	18-01-2016 18-01-2016 18-01-2016 18-01-2016	0:08:10	0:19:00	0:10:50 Ford Focus Svyatoslav 0:05:09 Volkswagen Ramaz	Ford Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
#	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	ba1f368be6 50ac5474f3 3ffa4a71a5 stantyan	27-01-2016 27-01-2016	0:31:32	0:50:00	0:18:28 Hyundai ix3 Anton	Hyundai Male	60.014295	30.412211	59.938885	30.393859 [	ANONYMIZ [AN
			210315ef68 18fa9d0dbb 3ffa4a71a5 stantyan f09f20ee43 15a6894da4 3ffa4a71a5 stantyan	22-02-2016 22-02-2016 25-02-2016 25-02-2016	0:30:06	0:37:00	0:06:54 Ford Focus Aleksey 0:04:46 Volkswagen Nikolay	Ford Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
#	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	7dedc1f838 a7d96f1385 3ffa4a71a5 stantyan	29-02-2016 29-02-2016	0:26:25	0:33:00	0:06:35 Chevrolet C Vadim	Chevrolet Male	60.016013 3	30.409379	59.928975	30.356312 [	ANONYMIZ [AI
			19564cbd09 524f217db5 3ffa4a71a5 stantyan 68e2996289 dce6ffc685 3ffa4a71a5 stantyan	14-03-2016 14-03-2016	0:18:01	0:21:00	0:02:59 Skoda Octa Aleksey 0:02:57 Volkswagen Maksim	Skoda Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
			2f7ca9c163 af6d53a1a0 3ffa4a71a5 stantyan	17-03-2016 17-03-2016	0:10:50	0:19:00	0:08:10 Volkswagen Dmitriy	Volkswagen Male					ANONYMIZ [AI
			9fa1d8baa5 484892a257 3ffa4a71a5 stantyan 5c44c704ce 5d5611a9bc 3ffa4a71a5 stantyan	21-03-2016 21-03-2016 25-03-2016 25-03-2016	0:08:10 0:19:16	0:14:00 0:29:00	0:05:50 Nissan Alme Nikolay 0:09:44 Audi A3 Aleksey	Nissan Male Audi Male	59.944748 60.016213	30.35941	59.94359		ANONYMIZ [AI ANONYMIZ [AI
#	,,,,,,,,,,,	Completed	e3ccba6686 d18e2051d1 3ffa4a71a5 stantyan	25-03-2016 25-03-2016	0:14:43	0:24:00	0:09:17 Toyota Cam Viktor	Toyota Male	60.042747	30.37656	60.015468	30.410383 [	ANONYMIZ [AN
			2cfe7cf24f9 fbaaa4fe33 3ffa4a71a5 stantyan b603f7e2fb b700e12aef 3ffa4a71a5 stantyan	***************************************	0:11:14	0:14:00	0:02:46 Lifan Solanc Igor 0:03:20 Hyundai Sol Ruslan	Lifan Male Hyundai Male	59.934486 3				1A] SIMYNONA 1A] SIMYNONA
#	*****	Completed	73fd8acb11 164cdace27 3ffa4a71a5 stantyan	***********	0:46:02	0:51:00	0:04:58 Mercedes-B Viktor	Mercedes-B Male	60.020078	30.409435	60.103418	29.947507 [	ANONYMIZ [AN
			accfabf376 5d5611a9bc 3ffa4a71a5 stantyan df2e21420e e6d00c4da5 3ffa4a71a5 stantyan	***************************************	0:16:04	0:26:00	0:09:56 Audi A3 Aleksey 0:05:23 Volkswagen Roman	Audi Male Volkswagen Male					1A] SIMYNONA 1A] SIMYNONA
			6c1c93bc79 513f8eb218 3ffa4a71a5 stantyan	**********	0:37:09	0:38:00	0:00:51 Ford Focus Valeriy	Ford Male	60.020078	30.409435	59.800195	30.274495 [	ANONYMIZ [AI
			160f29c8e2 ef0ef48fb473ffa4a71a5 stantyan 48fb57dd9b d5d270edbt 3ffa4a71a5 stantyan	######################################	0:12:09 0:16:18	0:20:00 0:17:00	0:07:51 Kia Rio Margarita 0:00:42 Volkswagen Egor	Kia Female Volkswagen Male					AN SIMYNONA AN SIMYNONA
			a60a08e90e 47f2730160 3ffa4a71a5 stantyan	19-04-2016 19-04-2016	0:17:07	0:24:00	0:06:53 Skoda Octav Viktor	Skoda Male					ANONYMIZ [AI
	ub	Completed er-rides-datase	ROF-seffork =0.5=3hR173ff=4=71=5 ctantuan	30_04_2016 30_04_2016	0-15-//2	0-17-00	0.01.17 Volkswagen Sergev	Volkswaren Male	60 011503 3	SU NUNUN 3	60 018113	30 318113 F	ANDMVMDIA
		în							m	H .	n - n -	100 %	
	K96 A	В	C D E F	G H	0.46.54	J	K L M	N O	p	Q	R	S 20 444052 I	T T
			706e53114a16802020013ffa4a71a5 stantyan 28f480d141126ea68bb(3ffa4a71a5 stantyan	***************************************	0:16:54 0:14:52	0:25:00 0:21:00	0:08:06 Hyundai Sol Mihail 0:06:08 Toyota Cor Viktor	Hyundai Male Toyota Male					ANONYMIZ [AI ANONYMIZ [AI
	,,,,,,,,,,,	Completed	dec533012t 75c7d46a46 3ffa4a71a5 stantyan	14-10-2016 14-10-2016	0:20:04	0:28:00	0:07:56 Skoda Octa Yuriy	Skoda Male	59.941415 3	30.366456	60.031827	30.428298 [	ANONYMIZ [AI
			8bda2b008: 70513ea55e 3ffa4a71a5 stantyan 95358afd69 d86f83f26a 3ffa4a71a5 stantyan	15-10-2016 15-10-2016 18-10-2016 18-10-2016	0:22:25 0:12:15	0:28:00 0:15:00	0:05:35 Kia Cee'd Aleksey 0:02:45 Volkswagen Ruslan	Kia Male Volkswagen Male					ANONYMIZ [AI ANONYMIZ [AI
	,,,,,,,,,,,	Completed	e252856e46d86f83f26a 3ffa4a71a5 stantyan	18-10-2016 18-10-2016	0:11:39	0:22:00	0:10:21 Volkswagen Ruslan	Volkswagen Male	60.067314 3	30.377042	60.035872	30.41767 [	ANONYMIZ [AI
			f4f55df9b6c59b001b9373ffa4a71a5 stantyan 819ac176fd caf93b6df8t3ffa4a71a5 stantyan	19-10-2016 19-10-2016 23-10-2016 23-10-2016	0:15:45 0:07:45	0:23:00 0:13:00	0:07:15 Skoda Octa Maksim 0:05:15 Ford Focus Ruslan	Skoda Male Ford Male	59.95914 3 59.941415 3				ANONYMIZ [AI ANONYMIZ [AI
	*****	Completed	1df46bf101 efd973b4b3 3ffa4a71a5 stantyan	24-10-2016 24-10-2016	0:18:11	0:30:00	0:11:49 Saturn Astra Dmitriy	Saturn Male	59.891657 3	30.511732	59.941415	30.366456 [	ANONYMIZ [A
			088d605e34a22df14b793ffa4a71a5stantyan 961f743e7ca18931166a3ffa4a71a5stantyan	26-10-2016 26-10-2016 26-10-2016 26-10-2016	0:16:32 0:35:06	0:24:00	0:07:28 Volkswagen Vyacheslav 0:06:54 Ford Monde Kirill	Volkswagen Male Ford Male					ANONYMIZ [A ANONYMIZ [A
	,,,,,,,,,,,,	Completed	855045cc06 736f262f69 3ffa4a71a5 stantyan	27-10-2016 27-10-2016	0:40:59	0:51:00	0:10:01 Hyundai Sol Valeriy	Hyundai Male	60.012595 3	30.399115	59.941415	30.366456 [	ANONYMIZ [A
			bfb9a1a99c dd7af04184 3ffa4a71a5 stantyan 9936a1b725 8a31e4d75: 3ffa4a71a5 stantyan	28-10-2016 28-10-2016 ####################################	0:16:46 0:26:52	0:29:00	0:12:14 Renault Dus Kirill 0:06:08 Ford Monde Mihail	Renault Male Ford Male	59.941415 3 59.941415 3				ANONYMIZ [AI ANONYMIZ [AI
	,,,,,,,,,,,	Completed	3b47b0f524 44c00edf5d 3ffa4a71a5 stantyan	***************************************	1:24:48	1:35:00	0:10:12 Ford Focus Vadim	Ford Male	59.982914	30.211445	59.959646	30.480601 [	ANONYMIZ [AI
			db0b34164( c06e7b8189 3ffa4a71a5 stantyan 83fe9c5ed1 968aa8f88c 3ffa4a71a5 stantyan	***************************************	0:11:04 0:21:20	0:19:00 0:39:00	0:07:56 Lifan Solanc Aleksandr 0:17:40 Kia Rio Vadim	Lifan Male Kia Male					ANONYMIZ [AI ANONYMIZ [AI
,	,,,,,,,,,,,,	Completed	41f664e3d0 9a92e4848c 3ffa4a71a5 stantyan	***************************************	0:36:11	0:48:00	0:11:49 Toyota Aver Vladimir	Toyota Male	59.959766 3	30.474675	60.031728	30.427998 [	ANONYMIZ [AN
			9a41064b25 dc522dce0c 3ffa4a71a5 stantyan d2d49cd1b6 64af7d80e5 3ffa4a71a5 stantyan	***************************************	0:18:43 0:35:40	0:26:00 0:48:00	0:07:17 Mitsubishi L Dmitriy 0:12:20 Ford Fiesta Artem	Mitsubishi Male Ford Male					1A] SIMYNONA 1A] SIMYNONA
1	,,,,,,,,,,,,	Completed	6b0fea4fab ef0ef48fb473ffa4a71a5 stantyan	18-11-2016 18-11-2016	0:20:31	0:32:00	0:11:29 Kia Rio Margarita	Kia Female	59.941415 3	30.366456	60.031556	30.428777 [	ANONYMIZ [AI
			9a67ecf355 fdb537e31f 3ffa4a71a5 stantyan e09859a8ea 3ed895daf4 3ffa4a71a5 stantyan	22-11-2016 22-11-2016 22-11-2016 22-11-2016	0:09:07 0:18:38	0:13:00	0:03:53 Renault Flue Aleksandr 0:01:22 Peugeot 408 Maksim	Renault Male Peugeot Male					ANONYMIZ [AN ANONYMIZ [AN
	,,,,,,,,,,,	Cancelled	b27215fa3f 09912e6d69 3ffa4a71a5 stantyan	25-11-2016 25-11-2016	0:25:32	1:00:00	0:34:28 Hyundai Equ Sergey	Hyundai Male	59.941415 3	30.366456	59.925468	30.488632 [	ANONYMIZ [AI
#			c1a5beeb74 57974b628c 3ffa4a71a5 stantyan d770190f94 384730723: 3ffa4a71a5 stantyan	25-11-2016 25-11-2016 25-11-2016 25-11-2016	0:08:58	0:13:00 0:09:00	0:04:02 Nissan Alme Dmitriy 0:03:04 Kia Rio Boris	Nissan Male Kia Male					1A] SIMYNONA 1A] SIMYNONA
##			4e0127f57b f699025b78 3ffa4a71a5 stantyan	25-11-2016 25-11-2016	0:09:52	0:16:00	0:06:08 Volkswagen Sergey	Volkswagen Male	59.924753 3	30.489413	59.946842	30.474938 [	ANONYMIZ [AN
#1	*****				0:23:13	0:33:00	0:09:47 Ford Focus Andrey	Ford Male	FO 044 44E 3	00 266466	50 025/85	30 488833 [	ANONYMIZ [AI
#1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	eb59895918 a696bd6e39 3ffa4a71a5 stantyan ac1490d5817445538d58 3ffa4a71a5 stantyan	25-11-2016 25-11-2016 25-11-2016 25-11-2016									
#1 #1 #1	********** ********* *********	Completed Completed Completed	eb59895918 a696bd6e39 3ffa4a71a5; stantyan ac1490d5817445538d58 3ffa4a71a5; stantyan 9a817ac952 9e9551459t 3ffa4a71a5; stantyan 42e0ca4d2c cf506ca03d 3ffa4a71a5; stantyan	25-11-2016 25-11-2016 25-11-2016 25-11-2016 26-11-2016 26-11-2016 26-11-2016 26-11-2016	0:47:09 0:14:09 0:12:05	0:59:00 0:25:00 0:15:00	0:11:51 Renault San Aleksandr 0:10:51 Audi A7 Yuriy 0:02:55 Mitsubishi L Mugutdin	Renault Male Audi Male Mitsubishi Male	59.892768 3 59.941415 3	30.515795 30.366456	59.941415 59.925456	30.366456 [ 30.488847 [	ANONYMIZ [AN ANONYMIZ [AN ANONYMIZ [AN

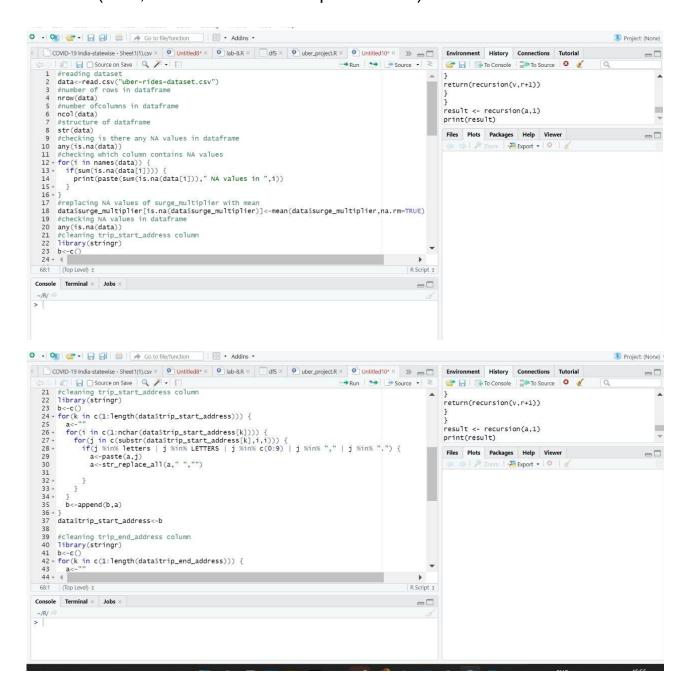
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- 4	Α	В	C	D	E		F	G	Н	1	J	K	L	M	N	0	P	Q	R	S	T U
301	******	Completed	2bc2d7c	0f3 c89a861	92c 3ffa4a7	1a5 star	ntyan	29-12-2016	29-12-2016	0:11:19	0:23:00	0:11:41	Hyundai Sol	Vyacheslav	Hyundai	Male	59.941415	30.366456	59.950601	30.499693	ANONYMIZ [ANONA]
302	******	Completed	8d123ec	50a 37e3ee8	575 3ffa4a7	1a5 star	ntyan	29-12-2016	29-12-2016	0:09:08	0:19:00	0:09:52	Lifan Soland	Sergey	Lifan	Male	59.951163	30.499077	59.941415	30.366456	ANONYMIZ [ANONA]
303	******	Completed	59cf3390	Oca 63d9ad2	69c 3ffa4a7	1a5 star	ntyan	*********	*********	0:38:12	0:42:00	0:03:48	Mercedes-E	Andrey	Mercedes-E	Male	59.941415	30.366456	59.799797	30.274013	(ANONYMIZ [ANONA]
304	******	Completed	37cf2290	Oca 63d9ad2	69c 3ffa4a7	1a5 star	ntyan	*********	*********	0:38:12	0:42:00	0:03:48	Renault Flue	Vsevolod	Renault	Male	59.941415	30.366456	59.799797	30.274013	(ANONYMIZ [ANONA]
305	******	Completed	2a57667	83( f1c8df3e	36: 3ffa4a7	1a5 star	ntyan	*********	*********	0:11:58	0:21:00	0:09:02	Ford Monde	Yuriy	Ford	Male	59.941415	30.366456	59.95103	30.409437	(ANONYMIZ [ANONA]
306	******	Completed	0e123f4	309 e8e0cfb	4c9 3ffa4a7	1a5 star	ntyan	**********	*********	0:11:51	0:17:00	0:05:09	Ford Focus	Aleksey	Ford	Male	59.947577	30.414213	59.941415	30.366456	ANONYMIZ [ANONA]
307	******	Completed	7e72c0b	510 2081b30	f5a 3ffa4a7	1a5 star	ntyan	**********	**********	0:16:20	0:18:00	0:01:40	Peugeot 20	Aleksandr	Peugeot	Male	59.941415	30.366456	59.950725	30.500285	ANONYMIZ [ANONA]
308	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	baac5a4	7b9 3bf0c22:	123 3ffa4a7	1a5 star	ntyan	**********	**********	0:06:04	0:14:00	0:07:56	Hyundai Sol	Aleksey	Hyundai	Male	59.949967	30.500365	59.941415	30.366456	ANONYMIZ [ANONA]
309	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	0af692d	4ed dab5903	329 3ffa4a7	1a5 star	ntyan	**********	**********	0:11:09	0:18:00	0:06:51	Renault Kol	Mihail	Renault	Male	59.941415	30.366456	59.94783	30.411762	ANONYMIZ [ANONA]
310	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	9929ec7	69a dc0cb5b	be5 3ffa4a7	1a5 star	ntyan	**********	**********	0:14:16	0:18:00	0:03:44	Volkswager	Azad	Volkswager	Male	59.947695	30.413582	59.941415	30.366456	ANONYMIZ [ANONA]
311	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	419e92d	7b8 cc5ad05	422 3ffa4a7	1a5 star	ntyan	**********	**********	0:17:56	0:27:00	0:09:04	Lada Granta	Abdula	Lada	Male	59.940385	30.45526	59.941415	30.366456	ANONYMIZ [ANONA]
312	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	a2e73d3	5f0 932492a	3a: 3ffa4a7	1a5 star	ntyan	13-01-2017	13-01-2017	0:18:26	0:26:00	0:07:34	Hyundai Sol	Dzhanpolac	l Hyundai	Male	59.941415	30.366456	60.031686	30.428149	(ANONYMIZ
313	*********	Completed	b0fa949	f94 c7f5f5f8	314 3ffa4a7	1a5 star	ntyan	13-01-2017	13-01-2017	0:24:05	0:28:00	0:03:55	Volkswager	Ruslan	Volkswager	Male	60.033742	30.420001	59.941415	30.366456	(ANONYMIZ (ANONA
314	******	Completed	e65d606	5e790dc469	3d8 3ffa4a7	1a5 star	ntyan	16-01-2017	16-01-2017	0:38:15	0:41:00	0:02:45	Hyundai Sol	Aleksandr	Hyundai	Male	59.938962	30.350321	59.941415	30.366456	(ANONYMIZ [ANONA]
315	*****	Completed	ac54411	52t 82a36d7	687 3ffa4a7	1a5 star	ntyan	19-01-2017	19-01-2017	0:33:12	0:37:00	0:03:48	Renault Me	Dmitriy	Renault	Male	59.799237	30.273759	59.941415	30.366456	(ANONYMIZ [ANONA]
316	******	Completed	9e98edd	c67 1d7b33f	dd5 3ffa4a7	1a5 star	ntyan	25-01-2017	25-01-2017	0:34:54	0:42:00	0:07:06	Kia Rio	Pavel	Kia	Male	59.941415	30.366456	59.957176	30.322328	(ANONYMIZ [ANONA]
317	******	Completed	91059eb	567 04ffcd2a	2et 3ffa4a7	1a5 star	ntyan	25-01-2017	25-01-2017	0:45:09	0:51:00	0:05:51	Ford Focus	Mihail	Ford	Male	59.955558	30.336818	59.959008	30.477597	ANONYMIZ [ANONA]
318	******	Completed	0d0d6d6	b92 ba5e670	416 3ffa4a7	1a5 star	ntyan	26-01-2017	26-01-2017	0:35:00	0:38:00	0:03:00	Mazda MAZ	Konstantin	Mazda	Male	59.941415	30.366456	59.800062	30.274375	ANONYMIZ [ANONA]
319	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	aefc7390	092 1788ef3	3eb 3ffa4a7	1a5 star	ntyan	**********	**********	0:32:18	0:38:00	0:05:42	Hyundai Sol	Mariya	Hyundai	Female	59.941415	30.366456	59.918052	30.341649	ANONYMIZ [ANONA]
320	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	813cd8a	eff; b60725f	055 3ffa4a7	1a5 star	ntyan	**********	#########	0:34:18	0:37:00	0:02:42	Volkswager	Mihail	Volkswager	Male	59.918062	30.341495	59.941415	30.366456	ANONYMIZ [ANONA]
321	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	29615b8	df1 8107ebb	4e: 3ffa4a7	1a5 star	ntyan	**********	**********	0:31:21	0:36:00	0:04:39	Nissan Alme	Denis	Nissan	Male	59.893612	30.519012	59.941415	30.366456	ANONYMIZ [ANONA]
322	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	f2103acc	dfecd5c9f6dl	bed 3ffa4a7	1a5 star	ntyan	********	**********	0:15:59	0:26:00	0:10:01	Kia Cee'd	Aleksandr	Kia	Male	59.941415	30.366456	59.940451	30.39729	ANONYMIZ [ANONA]
323	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	16dc612	5ff; 250f251	d1d 3ffa4a7	1a5 star	ntyan	**********	**********	0:19:00	0:21:00	0:02:00	Kia Sorento	Roman	Kia	Male	59.941224	30.394085	59.941415	30.366456	(ANONYMIZ
324	*********	Completed	b45aedc	5347124589	e893ffa4a7	1a5 star	ntyan	14-02-2017	14-02-2017	0:36:58	0:42:00	0:05:02	Ford Fiesta	Igor	Ford	Male	59.799291	30.273972	59.941415	30.366456	(ANONYMIZ (ANONA
325	******	Completed	d3dffbdf	95a 7f30458	dd9 3ffa4a7	1a5 star	ntyan	*********	*********	0:23:03	0:33:00	0:09:57	Nissan Alme	Viktor	Nissan	Male	59.941415	30.366456	59.916628	30.450753	(ANONYMIZ [ANONA]
326	******	Completed	6e99ddb	f1a e5c54c2	c20 3ffa4a7	1a5 star	ntyan	******	*********	0:20:14	0:26:00	0:05:46	Geely Emgr	Narek	Geely	Male	59.916897	30.451212	59.941415	30.366456	(ANONYMIZ
327	******	Completed	f8cdcca5	80 6bce685	bc8 3ffa4a7	1a5 star	ntyan	19-03-2017	19-03-2017	0:19:39	0:26:00	0:06:21	Ford Focus	Viktor	Ford	Male	59.941415	30.366456	59.916841	30.450966	[ANONYMIZ [ANONA]
328	*********	Completed	5ae3640	719 43fb08c	568 3ffa4a7	1a5 star	ntyan	19-03-2017	19-03-2017	0:14:41	0:20:00	0:05:19	Skoda Fabia	Dzhahon	Skoda	Male	59.916893	30.451014	59.941415	30.366456	[ANONYMIZ [ANON
329	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	a5a7fdct	d9(6c1c94c	35a 3ffa4a7	1a5 star	ntyan	19-03-2017	19-03-2017	0:29:14	0:38:00	0:08:46	Citroen Ber	Aleksandr	Citroen	Male	59.941415	30.366456	60.060315	30.29012	[ANONYMIZ [ANON
330	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	7807aee	5bc 6c1c94c	35a 3ffa4a7	1a5 star	ntyan	19-03-2017	19-03-2017	0:32:01	0:33:00	0:00:59	Citroen Ber	Aleksandr	Citroen	Male	60.060602	30.290772	59.941415	30.366456	[ANONYMIZ [ANON
331	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Completed	8c9bdf8	550 c336a18	980 3ffa4a7	1a5 star	ntyan	23-03-2017	23-03-2017	0:26:59	0:28:00	0:01:01	Nissan Alme	Aleksey	Nissan	Male	59.950157	30.409832	59.949298	30.40974	[ANONYMIZ [ANONA]
227		Completed		51/0h573ca	Nd1 2ff=/1=7	1a5 ctar	ntvan	*********		0-1/1-0/	0.22.00	0.07.56	Renault Los		Renault	Mala	50 060016	20 //2502	50 017/19	30 448084	VONV) SIVANNONV
14 4	▶ H ub	er-rides-datase	t-updated	+												111					<b>→</b> 1
		0															n		n - P1 -	100 N -	

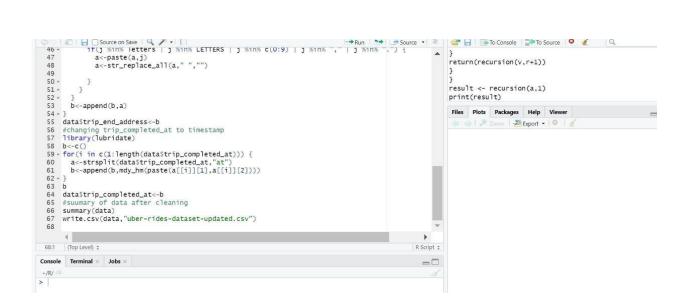
# Cleaning the Dataset: Code:

```
#reading dataset
data<-read.csv("uber-rides-dataset.csv")
#number of rows in dataframe
nrow(data)
#number of columns in dataframe
ncol(data)
#structure of dataframe
str(data)
#checking is there any NA values in dataframe
any(is.na(data))
#checking which column contains NA values
for(i in names(data)) {
 if(sum(is.na(data[i]))) {
  print(paste(sum(is.na(data[i]))," NA values in ",i))
 }
#replacing NA values of surge multiplier with mean
data$surge multiplier[is.na(data$surge multiplier)]<-mean(data$surge
 multiplier,na.rm=TRUE)
#checking NA values in dataframe
any(is.na(data))
#cleaning trip start address column
library(stringr)
```

```
b<-c()
for(k in c(1:length(data$trip start address))) {
for(i in c(1:nchar(data$trip start address[k]))) {
 for(j in c(substr(data$trip start address[k],i,i))) {
  if(j %in% letters | j %in% LETTERS | j %in% c(0:9) | j %in% "," | j
%in% ".") {
   a<-paste(a,j)
   a<-str replace all(a," ","")
}
 b<-append(b,a)
data$trip start address<-b
#cleaning trip end address column
library(stringr)
b<-c()
for(k in c(1:length(data$trip end address))) {
 a<-""
 for(i in c(1:nchar(data$trip_end_address[k]))) {
  for(j in c(substr(data$trip end address[k],i,i))) {
    if(j %in% letters | j %in% LETTERS | j %in% c(0:9) | j %in% "," | j
%in% ".") {
     a<-paste(a,j)
     a<-str_replace_all(a," ","")
 b<-append(b,a)
data$trip end address<-b
#changing trip completed at to timestamp
library(lubridate)
b<-c()
for(i in c(1:length(data$trip completed at))) {
 a<-strsplit(data$trip completed at,"at")
 b<-append(b,mdy hm(paste(a[[i]][1],a[[i]][2])))
}
```

b
data\trip\_completed\_at<-b
#suumary of data after cleaning
summary(data)
write.csv(data,"uber-rides-dataset-updated.csv")





#### Conclusion:

There were very few clearly erroneous entries in the dataset and a small proportion of suspicious cases or *anomalies* that warrant further internal analysis. All taxi and for-hire-vehicles companies operating in the city, which include Uber, Lyft, and others release their data periodically. An update is published twice a year. The destination data were missing, and an extremely small number of cases had missing trip distance and destination. The imputation method chosen for the latter set was the mean distance and duration of their respective origin-destination pair. The entries with missing destination were left unchanged, although the information from the vast number of complete cases could potentially be used to determine the most probable destination.

The relation between a trip's duration and distance is not entirely linear. Rather, it approximates to a power function because shorter trips, occurring mostly within busy areas of traffic, tend to result in lower average trip speed. Analysis and undoubtedly highlighted the critical importance of a well-defined business problem, which directs all coding efforts to a particular purpose and reveals key details. This business case also attempted to demonstrate the basic use of python in everyday business activities, showing how fun, important, and fun it can behavioural change of customers raising more complaints about taxi services.

## Reference:

- I.  $\underline{\text{https://data-flair.training/blogs/r-data-science-project-uber-data-analy}}\underline{\text{sis/}}$
- II.https://www.sciencedirect.com/science/article/abs/pii/S2214367X203

# Thank You