

# Overview

[Overview](#)

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Dataset statistics

<b>Number of variables</b>	15
<b>Number of observations</b>	1000
<b>Missing cells</b>	171
<b>Missing cells (%)</b>	1.1%
<b>Duplicate rows</b>	0
<b>Duplicate rows (%)</b>	0.0%
<b>Total size in memory</b>	501.4 KiB
<b>Average record size in memory</b>	513.4 B

Variable types

<b>Text</b>	1
<b>Numeric</b>	7
<b>Categorical</b>	6
<b>Date Time</b>	1

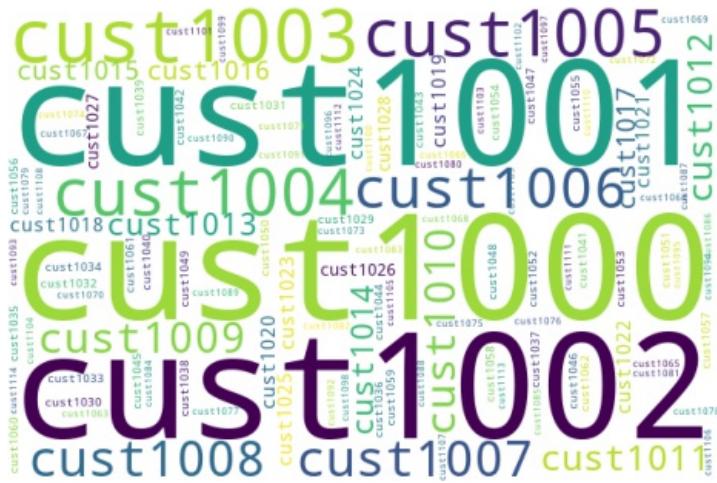
# Variables

Select Columns

[customer\\_id](#)

Text

<b>Distinct</b>	1000
<b>Distinct (%)</b>	100.0%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	63.6 KiB


[More details](#)

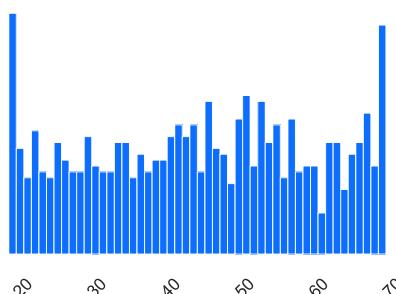
### age

Real number ( $\mathbb{R}$ )

Missing

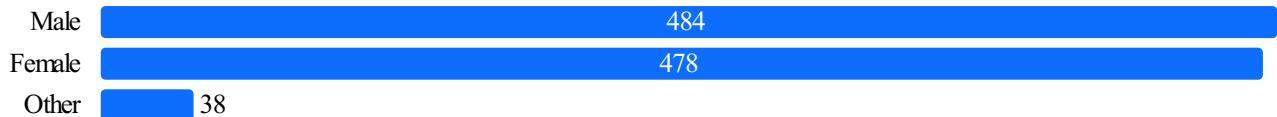
<b>Distinct</b>	52
<b>Distinct (%)</b>	5.7%
<b>Missing</b>	87
<b>Missing (%)</b>	8.7%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	43.817087

<b>Minimum</b>	18
<b>Maximum</b>	69
<b>Zeros</b>	0
<b>Zeros (%)</b>	0.0%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB


[More details](#)

gender  
Categorical

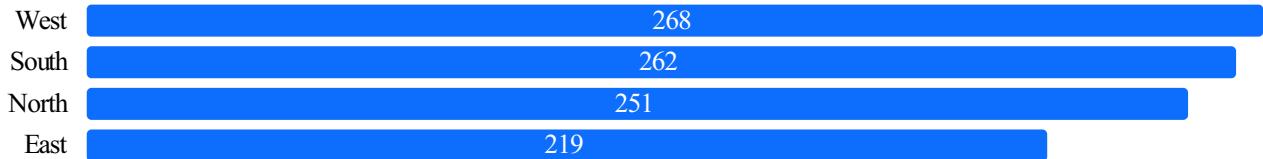
<b>Distinct</b>	3
<b>Distinct (%)</b>	0.3%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	60.7 KiB



[More details](#)

region  
Categorical

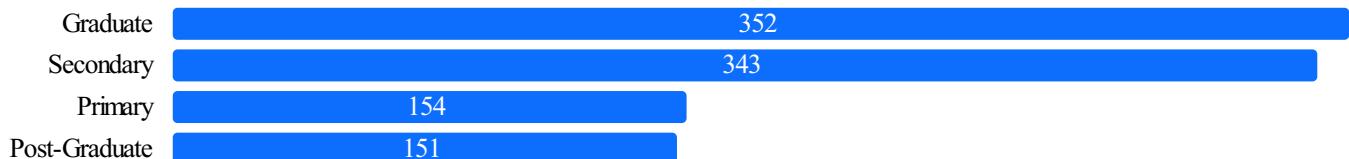
<b>Distinct</b>	4
<b>Distinct (%)</b>	0.4%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	60.2 KiB



[More details](#)

education\_level  
Categorical

<b>Distinct</b>	4
<b>Distinct (%)</b>	0.4%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	64.5 KiB



[More details](#)

employment\_type  
Categorical

Missing

<b>Distinct</b>	3
<b>Distinct (%)</b>	0.3%
<b>Missing</b>	42
<b>Missing (%)</b>	4.2%
<b>Memory size</b>	65.1 KiB



[More details](#)

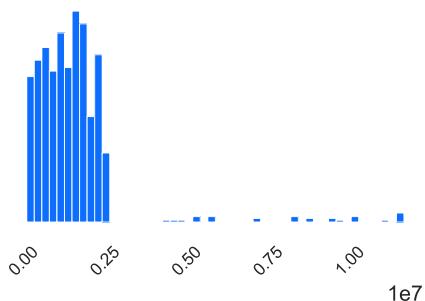
### annual\_income

Real number (ℝ)

Missing

<b>Distinct</b>	625
<b>Distinct (%)</b>	63.9%
<b>Missing</b>	22
<b>Missing (%)</b>	2.2%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	1488918.1

<b>Minimum</b>	80215
<b>Maximum</b>	11642071
<b>Zeros</b>	0
<b>Zeros (%)</b>	0.0%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB



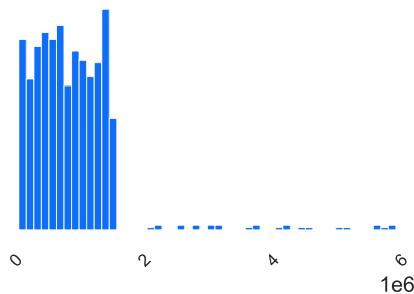
[More details](#)

### loan\_amount

Real number (ℝ)

<b>Distinct</b>	646
<b>Distinct (%)</b>	64.6%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	854462.82

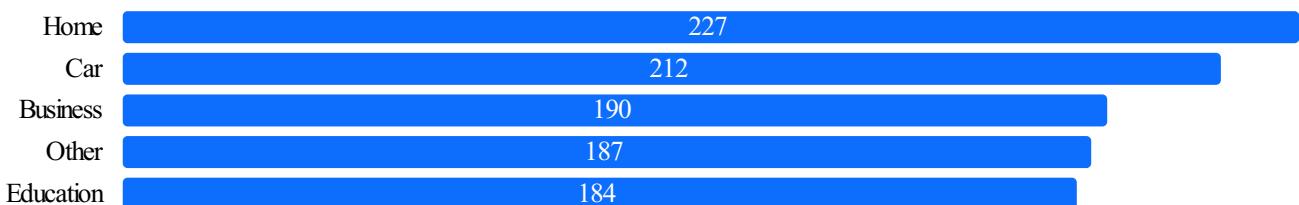
<b>Minimum</b>	31620
<b>Maximum</b>	5904413
<b>Zeros</b>	0
<b>Zeros (%)</b>	0.0%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB


[More details](#)

### loan\_purpose

Categorical

<b>Distinct</b>	5
<b>Distinct (%)</b>	0.5%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	61.3 KiB


[More details](#)

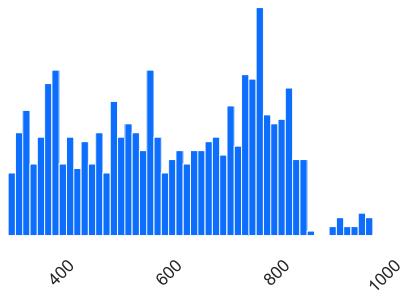
### credit\_score

Real number ( $\mathbb{R}$ )

Missing

<b>Distinct</b>	373
<b>Distinct (%)</b>	38.1%
<b>Missing</b>	20
<b>Missing (%)</b>	2.0%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	595.97041

<b>Minimum</b>	300
<b>Maximum</b>	977
<b>Zeros</b>	0
<b>Zeros (%)</b>	0.0%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB



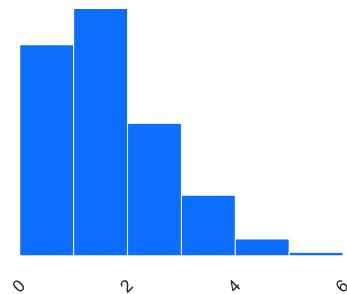
[More details](#)

**repayment\_history**  
Real number ( $\mathbb{R}$ )

Zeros

<b>Distinct</b>	7
<b>Distinct (%)</b>	0.7%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	1.164

<b>Minimum</b>	0
<b>Maximum</b>	7
<b>Zeros</b>	314
<b>Zeros (%)</b>	31.4%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB

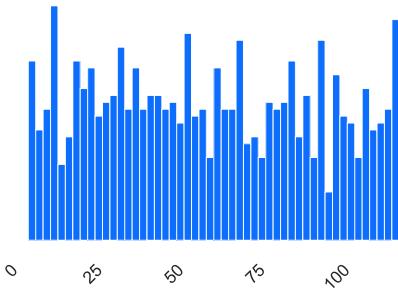

[More details](#)

### transaction\_count

Real number ( $\mathbb{R}$ )

<b>Distinct</b>	115
<b>Distinct (%)</b>	11.5%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	60.434

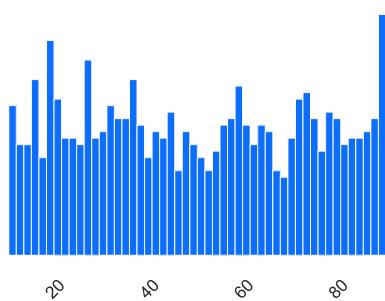
<b>Minimum</b>	5
<b>Maximum</b>	119
<b>Zeros</b>	0
<b>Zeros (%)</b>	0.0%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB

[More details](#)

spending\_ratio  
Real number ( $\mathbb{R}$ )

<b>Distinct</b>	939
<b>Distinct (%)</b>	93.9%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Infinite</b>	0
<b>Infinite (%)</b>	0.0%
<b>Mean</b>	49.72901

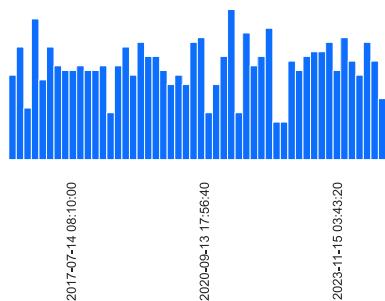
<b>Minimum</b>	10.01
<b>Maximum</b>	89.9
<b>Zeros</b>	0
<b>Zeros (%)</b>	0.0%
<b>Negative</b>	0
<b>Negative (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB

[More details](#)

join\_date  
Date

<b>Distinct</b>	867
<b>Distinct (%)</b>	86.7%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	7.9 KiB

<b>Minimum</b>	2016-01-07 00:00:00
<b>Maximum</b>	2024-12-31 00:00:00
<b>Invalid dates</b>	0
<b>Invalid dates (%)</b>	0.0%


[More details](#)

### default\_flag

Categorical

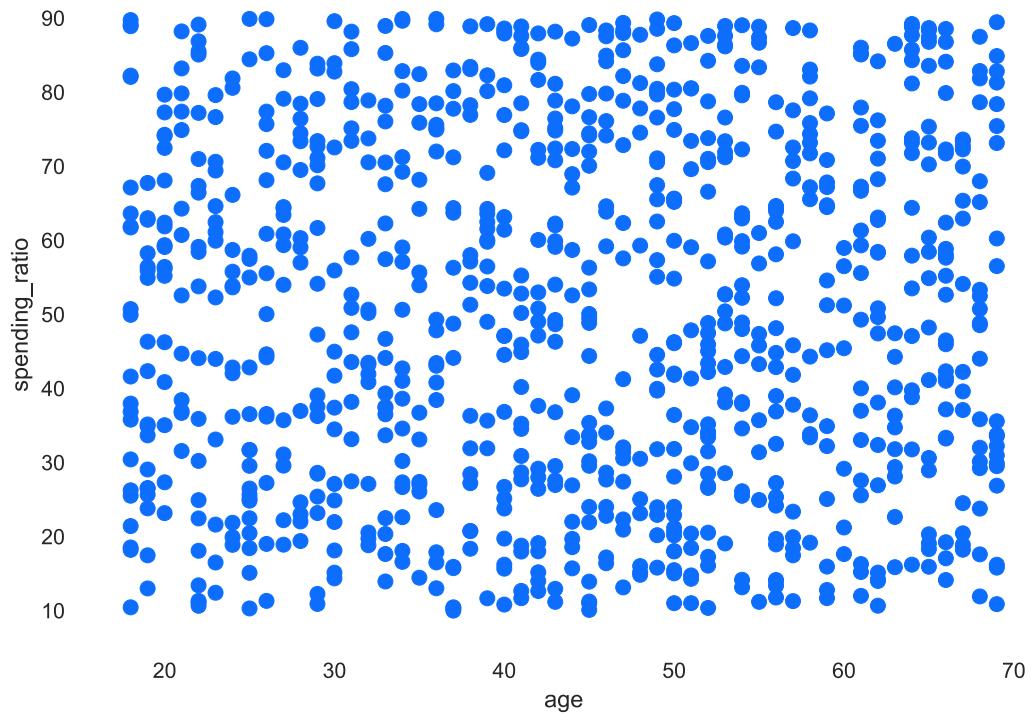
<b>Distinct</b>	2
<b>Distinct (%)</b>	0.2%
<b>Missing</b>	0
<b>Missing (%)</b>	0.0%
<b>Memory size</b>	56.8 KiB


[More details](#)

## Interactions

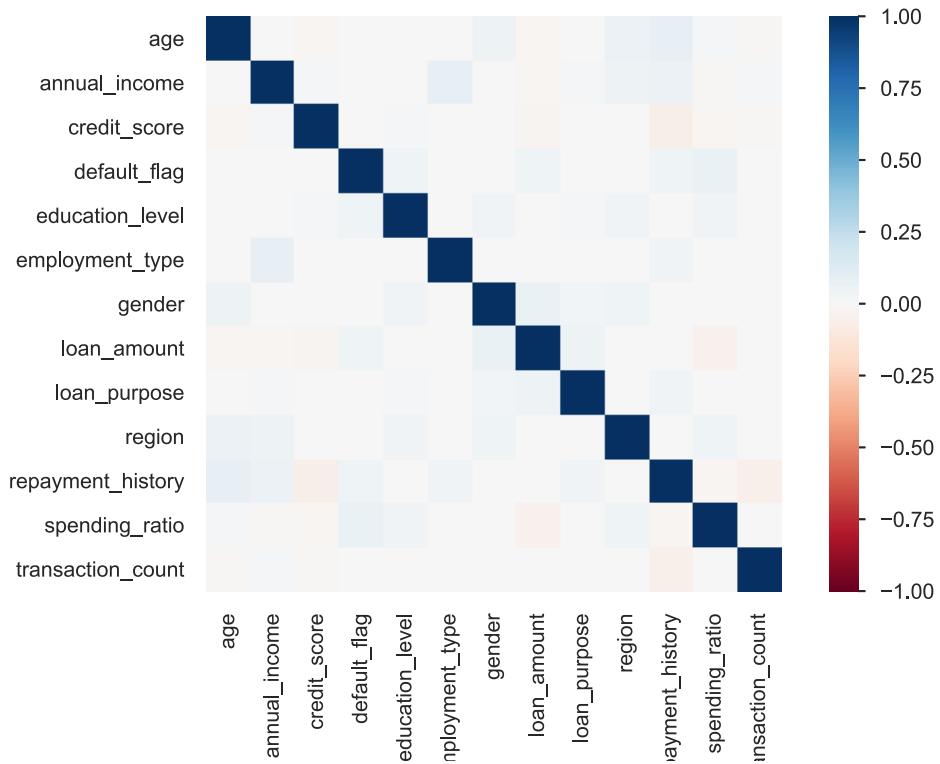
age  
annual\_income  
loan\_amount  
credit\_score  
repayment\_history  
transaction\_count  
spending\_ratio  
spending\_ratio  
age  
annual\_income  
loan\_amount  
credit\_score

repayment\_history  
transaction\_count



## Correlations

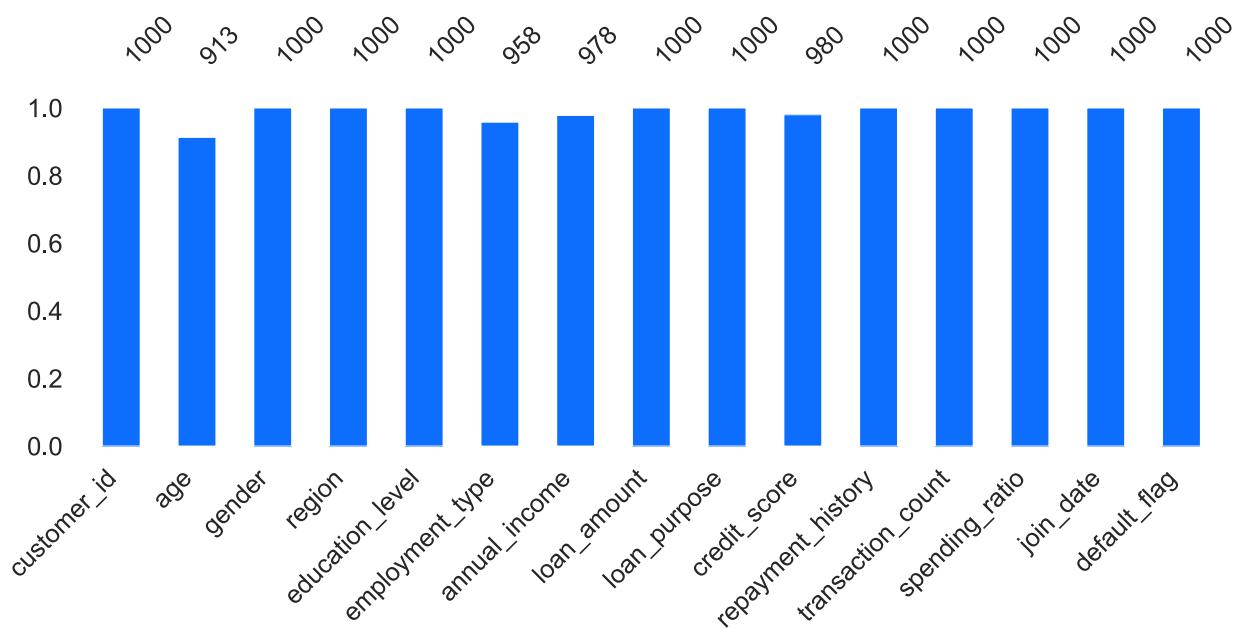
Auto  
Heatmap  
Table



## Missing values

Count  
Matrix

## Heatmap



A simple visualization of nullity by column.

## Sample

First rows

Last rows

	customer_id	age	gender	region	education_level	employment_type	annual_income	loan_amount	loan_purpose	credit_score	repayment_history	transaction_count	spending_ratio	join_date	default_flag
0	CUST1000	56.0	Female	North	Secondary	Salaried	2273654.0	1390573	Other	507.					
1	CUST1001	69.0	Male	North	Post-Graduate	Self-Employed	655425.0	579308	Business	635.					
2	CUST1002	46.0	Female	South	Graduate	Self-Employed	227032.0	166149	Business	512.					
3	CUST1003	32.0	Male	North	Secondary	Self-Employed	688986.0	1443119	Car	520.					
4	CUST1004	60.0	Male	South	Primary	Salaried	512206.0	303958	Home	443.					
5	CUST1005	25.0	Male	West	Graduate	Salaried	314318.0	303497	Car	339.					
6	CUST1006	38.0	Male	East	Graduate	Self-Employed	2260943.0	407218	Car	307.					
7	CUST1007	56.0	Male	East	Secondary	Salaried	1345197.0	80755	Car	792.					
8	CUST1008	36.0	Male	North	Graduate	Salaried	134745.0	1377921	Car	544.					
9	CUST1009	40.0	Female	South	Post-Graduate	NaN	462811.0	362548	Business	316.					