

# HashPrep Report

v0.1.0a4

2 Critical

17 Warnings

## Overview

### Dataset Statistics

Variables	12
Observations	891
Missing cells	866 (8.1%)
Duplicate rows	0 (0.0%)
Memory	315.0 KiB
Avg record size	362.1 B

### VARIABLE TYPES

Numeric	3
Categorical	6
Text	3

## Alerts

### MISSING

- 77.1% missing values in 'Cabin'
- Missingness in 'Age' correlates with 6 columns (Pclass, Parch, Embarked)
- Missingness in 'Cabin' correlates with 6 columns (Pclass, Fare, Survived)

### HIGH CARDINALITY

- Column 'Name' has 891 unique values (100.0% of rows)
- Column 'Ticket' has 681 unique values (76.4% of rows)
- Column 'Cabin' has 147 unique values (16.5% of rows)

### OUTLIERS

- Column 'SibSp' has 12 potential outliers (1.3% of non-missing values)
- Column 'Parch' has 10 potential outliers (1.1% of non-missing values)
- Column 'Fare' has 11 potential outliers (1.2% of non-missing values)

### ZEROS

- Column 'Survived' has 61.6% zero values
- Column 'SibSp' has 68.2% zero values
- Column 'Parch' has 76.1% zero values

### SKEWNESS

- Column 'SibSp' is highly skewed (skewness: 3.70)

- Column 'Fare' is highly skewed (skewness: 4.79)

## UNIFORM

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- 'PassengerId' is uniformly distributed and monotonic

## UNIQUE

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- 'PassengerId' has unique values
- 'Name' has unique values

## CONSTANT LENGTH

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- 'Embarked' has constant length (1 chars for 100.0% of values)

## HIGH CORRELATION

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- Categorical columns 'Survived' and 'Sex' highly associated (Cramer's V: 0.540)

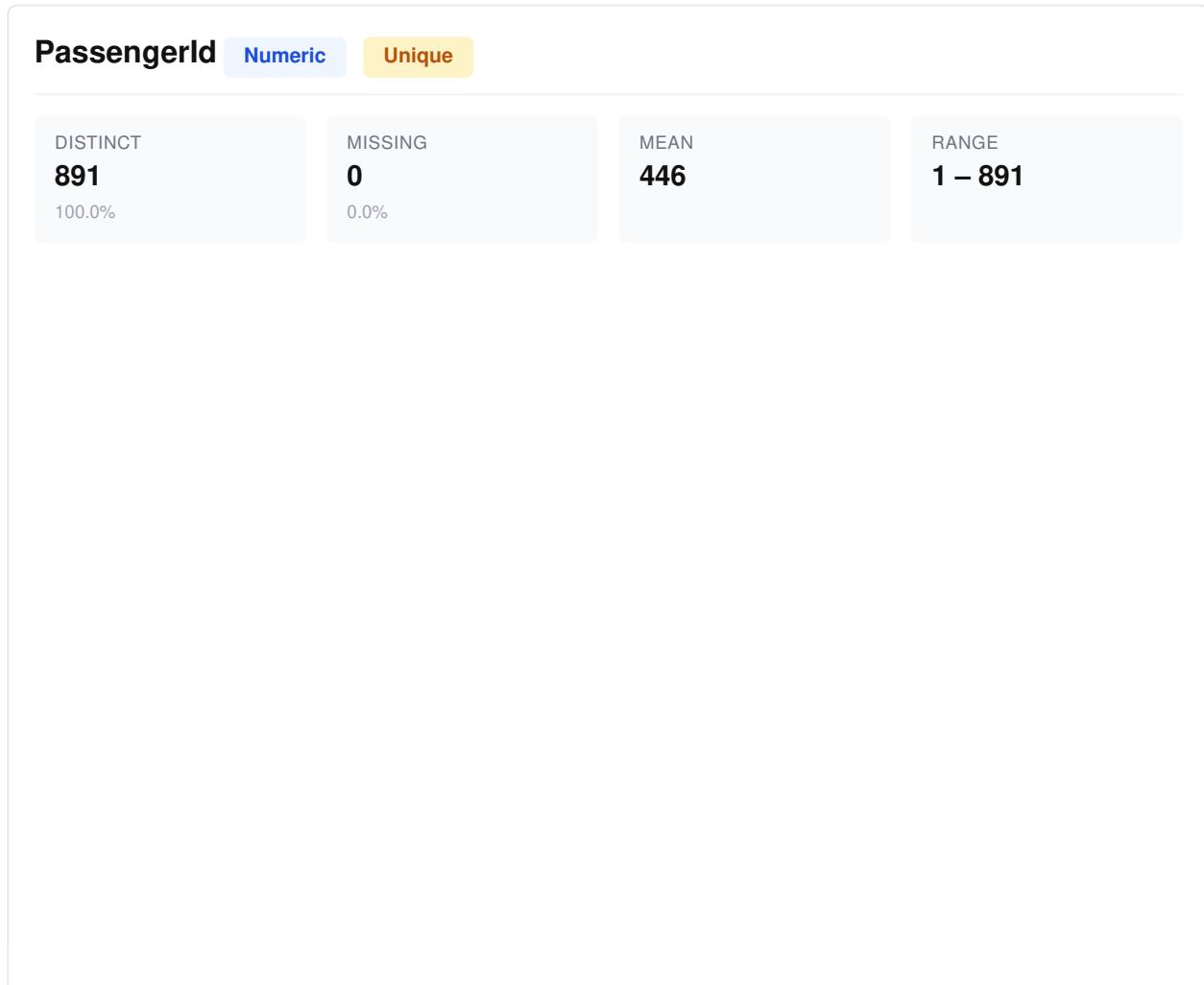
# Reproduction

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Analysis started	Analysis finished	Duration	Software version
2026-02-08T12:02:11	2026-02-08T12:02:15	4.35 seconds	hashprep v0.1.0a4

## Variables

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## QUANTILE STATISTICS

Minimum	1
5th percentile	45.5
Q1 (25%)	223.5
Median (50%)	446
Q3 (75%)	668.5
95th percentile	846.5
Maximum	891
Range	890
IQR	445

## DESCRIPTIVE STATISTICS

Mean	446
Std deviation	257.354
Variance	66231
CV	0.577027
Skewness	0
Kurtosis	-1.2
MAD	223
Sum	397386
Monotonicity	Increasing

## COMMON VALUES

VALUE	COUNT	%
891	1	0.1%
1	1	0.1%
2	1	0.1%
3	1	0.1%
4	1	0.1%
5	1	0.1%
6	1	0.1%
7	1	0.1%
8	1	0.1%
9	1	0.1%

## EXTREME VALUES

MINIMUM
1
2
3
4
5
6
7
8
9
10

MAXIMUM
882
883
884
885
886
887
888
889
890
891

## VALUE COUNTS

Zeros	0 (0.0%)
Negative	0 (0.0%)
Infinite	0 (0.0%)

**Survived** Categorical

DISTINCT <b>2</b> 0.2%	MISSING <b>0</b> 0.0%	MEMORY <b>7.1 KiB</b>	LENGTH <b>1 – 1</b> chars
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### LENGTH STATISTICS

Min length	1
Max length	1
Mean length	1.00
Median length	1.00

### CHARACTER STATISTICS

Total characters	891
Distinct characters	2
Distinct categories	1

### COMMON VALUES

VALUE	COUNT	%
0	549	61.6%
1	342	38.4%

## Pclass Categorical

DISTINCT <b>3</b> 0.3%	MISSING <b>0</b> 0.0%	MEMORY <b>7.1 KiB</b>	LENGTH <b>1 – 1</b> chars
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### LENGTH STATISTICS

Min length	1
Max length	1
Mean length	1.00
Median length	1.00

### CHARACTER STATISTICS

Total characters	891
Distinct characters	3
Distinct categories	1

## COMMON VALUES

VALUE	COUNT	%
3	491	55.1%
1	216	24.2%
2	184	20.7%

## Name Text Unique

DISTINCT

**891**

100.0%

MISSING

**0**

0.0%

MEMORY

**73.2 KiB**

LENGTH

**12 – 82**

chars

## LENGTH STATISTICS

Min length	12
Max length	82
Mean length	26.97
Median length	25.00

## CHARACTER STATISTICS

Total characters	24026
Distinct characters	60
Distinct categories	7

## Sex Categorical

DISTINCT

**2**

0.2%

MISSING

**0**

0.0%

MEMORY

**53.8 KiB**

LENGTH

**4 – 6**

chars

## LENGTH STATISTICS

Min length	4
Max length	6
Mean length	4.70
Median length	4.00

## CHARACTER STATISTICS

Total characters	4192
Distinct characters	5
Distinct categories	1

## COMMON VALUES

VALUE	COUNT	%
male	577	64.8%
female	314	35.2%

## Age Numeric 19.9% missing

DISTINCT

**88**

12.3%

MISSING

**177**

19.9%

MEAN

**29.7**

RANGE

**0.42 – 80**

## QUANTILE STATISTICS

Minimum	0.42
5th percentile	4
Q1 (25%)	20.125
Median (50%)	28
Q3 (75%)	38
95th percentile	56
Maximum	80
Range	79.58
IQR	17.875

## DESCRIPTIVE STATISTICS

Mean	29.6991
Std deviation	14.5265
Variance	211.019
CV	0.489122
Skewness	0.389108
Kurtosis	0.178274
MAD	9
Sum	21205.2
Monotonicity	None

## COMMON VALUES

VALUE	COUNT	%
24.0	30	4.2%
22.0	27	3.8%
18.0	26	3.6%
28.0	25	3.5%
30.0	25	3.5%
19.0	25	3.5%
21.0	24	3.4%
25.0	23	3.2%
36.0	22	3.1%
29.0	20	2.8%

## EXTREME VALUES

MINIMUM
0.42
0.67
0.75
0.75
0.83
0.83
0.92
1
1
1
MAXIMUM
65
65
66
70
70
70.5
71
71
74
80

## VALUE COUNTS

Zeros	0 (0.0%)
Negative	0 (0.0%)
Infinite	0 (0.0%)

SibSp Categorical

DISTINCT <b>7</b> 0.8%	MISSING <b>0</b> 0.0%	MEMORY <b>7.1 KiB</b>	LENGTH <b>1 – 1</b> chars
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## LENGTH STATISTICS

Min length	1
Max length	1
Mean length	1.00
Median length	1.00

## CHARACTER STATISTICS

Total characters	891
Distinct characters	7
Distinct categories	1

## COMMON VALUES

VALUE	COUNT	%
0	608	68.2%
1	209	23.5%
2	28	3.1%
4	18	2.0%
3	16	1.8%
8	7	0.8%
5	5	0.6%

## Parch Categorical

DISTINCT <b>7</b> 0.8%	MISSING <b>0</b> 0.0%	MEMORY <b>7.1 KiB</b>	LENGTH <b>1 – 1</b> chars
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## LENGTH STATISTICS

Min length	1
Max length	1
Mean length	1.00
Median length	1.00

## CHARACTER STATISTICS

Total characters	891
Distinct characters	7
Distinct categories	1

## COMMON VALUES

VALUE	COUNT	%
0	678	76.1%
1	118	13.2%
2	80	9.0%
5	5	0.6%
3	5	0.6%
4	4	0.4%
6	1	0.1%

## Ticket Text

DISTINCT

**681**

76.4%

MISSING

**0**

0.0%

MEMORY

**55.6 KiB**

LENGTH

**3 – 18**

chars

## LENGTH STATISTICS

Min length	3
Max length	18
Mean length	6.75
Median length	6.00

## CHARACTER STATISTICS

Total characters	6015
Distinct characters	35
Distinct categories	5

## Fare Numeric

DISTINCT	MISSING	MEAN	RANGE
<b>248</b> 27.8%	<b>0</b> 0.0%	<b>32.2</b>	<b>0 – 512.3</b>

### QUANTILE STATISTICS

Minimum	0
5th percentile	7.225
Q1 (25%)	7.9104
Median (50%)	14.4542
Q3 (75%)	31
95th percentile	112.079
Maximum	512.329
Range	512.329
IQR	23.0896

### DESCRIPTIVE STATISTICS

Mean	32.2042
Std deviation	49.6934
Variance	2469.44
CV	1.54307
Skewness	4.78732
Kurtosis	33.3981
MAD	6.9042
Sum	28693.9
Monotonicity	None

## COMMON VALUES

VALUE	COUNT	%
8.05	43	4.8%
13.0	42	4.7%
7.8958	38	4.3%
7.75	34	3.8%
26.0	31	3.5%
10.5	24	2.7%
7.925	18	2.0%
7.775	16	1.8%
7.2292	15	1.7%
26.55	15	1.7%

## EXTREME VALUES

### MINIMUM

0 0 0 0 0 0 0 0 0 0

### MAXIMUM

247.5 262.4 262.4 263 263 263 263

512.3 512.3 512.3

## VALUE COUNTS

Zeros	15 (1.7%)
Negative	0 (0.0%)
Infinite	0 (0.0%)

## Cabin Text 77.1% missing

### DISTINCT

**147**

72.1%

### MISSING

**687**

77.1%

### MEMORY

**33.7 KiB**

### LENGTH

**1 – 15**

chars

## LENGTH STATISTICS

Min length	1
Max length	15
Mean length	3.59
Median length	3.00

## CHARACTER STATISTICS

Total characters	732
Distinct characters	19
Distinct categories	3

## Embarked Categorical 0.2% missing

### DISTINCT

**3**

0.3%

### MISSING

**2**

0.2%

### MEMORY

**50.5 KiB**

### LENGTH

**1 – 1**

chars

## LENGTH STATISTICS

Min length	1
Max length	1
Mean length	1.00
Median length	1.00

## CHARACTER STATISTICS

Total characters	889
Distinct characters	3
Distinct categories	1

## COMMON VALUES

VALUE	COUNT	%
S	644	72.4%
C	168	18.9%
Q	77	8.7%

# Correlations

## Numeric Correlations (Pearson - Top Pairs)

Feature 1	Feature 2	Correlation
Fare	Pclass	-0.549
Parch	SibSp	0.415
Age	Pclass	-0.369
Pclass	Survived	-0.338
Age	SibSp	-0.308
Fare	Survived	0.257
Fare	Parch	0.216
Age	Parch	-0.189
Fare	SibSp	0.160
Age	Fare	0.096
Pclass	SibSp	0.083
Parch	Survived	0.082
Age	Survived	-0.077
PassengerId	SibSp	-0.058
Age	PassengerId	0.037
SibSp	Survived	-0.035

Feature 1	Feature 2	Correlation
PassengerId	Pclass	-0.035
Parch	Pclass	0.018
Fare	PassengerId	0.013
PassengerId	Survived	-0.005

## Categorical Correlations (Cramer's V - Top Pairs)

Pair	Value
Name__Sex	1.000
Name__Embarked	1.000
Name__Cabin	1.000
Name__Ticket	1.000
Ticket__Embarked	0.998
Ticket__Cabin	0.950
Cabin__Embarked	0.949
Sex__Ticket	0.860
Sex__Cabin	0.859
Sex__Embarked	0.123

## Missing Values

### Missing Values by Column

Column	Count	Percentage
Cabin	687	77.10%
Age	177	19.87%
Embarked	2	0.22%

## Sample Data

### Head (first 5 rows)

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	None	S
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Thayer)	female	38.0	1	0	PC 17599	71.2833	C85	C
3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	None	S
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	C123	S
5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500	None	S

### Random Sample (10 rows)

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
710	1	3	Moubarek, Master. Halim Gonios ("William George")	male	NaN	1	1	2661	15.2458	None	C

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
440	0	2	Kvillner, Mr. Johan Henrik Johannesson	male	31.0	0	0	C.A. 18723	10.5000	None	S
841	0	3	Aihomaki, Mr. Ilmari Rudolf	male	20.0	0	0	SOTON/O2 3101287	7.9250	None	S
721	1	2	Harper, Miss. Annie Jessie "Nina"	female	6.0	0	1	248727	33.0000	None	S
40	1	3	Nicola-Yarred, Miss. Jamila	female	14.0	1	0	2651	11.2417	None	C
291	1	1	Barber, Miss. Ellen "Nellie"	female	26.0	0	0	19877	78.8500	None	S
301	1	3	Kelly, Miss. Anna Katherine "Annie Kate"	female	NaN	0	0	9234	7.7500	None	Q
334	0	3	Vander Planke, Mr. Leo Edmondus	male	16.0	2	0	345764	18.0000	None	S
209	1	3	Carr, Miss. Helen "Ellen"	female	16.0	0	0	367231	7.7500	None	Q
137	1	1	Newsom, Miss. Helen Monypeny	female	19.0	0	2	11752	26.2833	D47	S

### Tail (last 5 rows)

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536	13.00	None	S
888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053	30.00	B42	S
889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W./C. 6607	23.45	None	S
890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369	30.00	C148	C
891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376	7.75	None	Q

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