

**User Name:** Aaryan Agarwal

**User ID:** 17928

**Tool Used:** Gretel

**Execution Start Time:** 2023-09-18 12:54:22

**Execution End Time:** 2023-09-18 12:54:22

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### **All Categorical Variables:**

Survived

Ticket

Sex

Cabin

Name

Embarked

### **Independent Continuous Variables:**

PassengerId

Pclass

Age

SibSp

Parch

Fare

**User Name:** Aaryan Agarwal  
**User ID:** 38473  
**Tool Used:** Gretel  
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## Kolmogorov-Smirnov Test Results:

Variable	p-value	KS-Statistic	Inference	Result
PassengerId	1.5682775992087616e-48	0.2684776655443322	Does not match the real data distribution significantly.	Fail
Pclass	6.040481159102964e-12	0.13197575757575758	Does not match the real data distribution significantly.	Fail
Age	3.457973660150079e-39	0.2413117845117845	Does not match the real data distribution significantly.	Fail
SibSp	2.5786292703585823e-05	0.08597934904601572	Does not match the real data distribution significantly.	Fail
Parch	7.984215474120097e-05	0.08154276094276094	Does not match the real data distribution significantly.	Fail
Fare	1.8106059226207038e-157	0.47710864197530867	Does not match the real data distribution significantly.	Fail

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## T-Test Results:

Variable	p-value	T-Statistic	Inference	Result
PassengerId	0.0002773089345938805	3.637819205714891	Significantly different means from real data.	Fail
Pclass	1.0331804101507008e-09	6.114126846359151	Significantly different means from real data.	Fail
Age	nan	nan	Significantly different means from real data.	Fail
SibSp	2.131506513712287e-06	-4.745266668286333	Significantly different means from real data.	Fail
Parch	0.011809978805879971	-2.51855653961849	Significantly different means from real data.	Fail
Fare	1.7469815171730086e-12	7.068543946945586	Significantly different means from real data.	Fail

**User Name:** Aaryan Agarwal  
**User ID:** 30818  
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## Mann-Whitney U Test Results:

Variable	p-value	MWU-Statistic	Inference	Result
PassengerId	3.0483860501763937e-06	2444126.0	Significantly different distributions from real data.	Fail
Pclass	5.018352759625736e-09	2477037.5	Significantly different distributions from real data.	Fail
Age	nan	nan	Significantly different distributions from real data.	Fail
SibSp	3.7416323677997957e-06	2040726.5	Significantly different distributions from real data.	Fail
Parch	4.279772617887337e-05	2072229.0	Significantly different distributions from real data.	Fail
Fare	5.065045944198622e-73	3058671.5	Significantly different distributions from real data.	Fail

**User Name:** Aaryan Agarwal  
**User ID:** 84456  
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## ANOVA Results:

Variable	p-value	F-Statistic	Inference	Result
PassengerId	3.0482262645543825e-06	13.233728573468158	Significantly different means from real data.	Fail
Pclass	5.0179995192130826e-09	37.38254709336976	Significantly different means from real data.	Fail
Age	6.782911415772228e-11	8.305689333131532	Significantly different means from real data.	Fail
SibSp	3.7414088465715596e-06	22.517555753149274	Significantly different means from real data.	Fail
Parch	4.2795293916982664e-05	6.3431270432550635	Significantly different means from real data.	Fail
Fare	5.0640476230184647e-73	49.96431352990109	Significantly different means from real data.	Fail

**User Name:** Aaryan Agarwal  
**User ID:** 78915  
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## Kruskal-Wallis Test Results:

Variable	p-value	H-Statistic	Inference	Result
PassengerId	3.0482262645543825e-06	21.785959811144902	Significantly different distributions from real data.	Fail
Pclass	5.0179995192130826e-09	34.18242925243185	Significantly different distributions from real data.	Fail
Age	6.782911415772228e-11	42.58059080090582	Significantly different distributions from real data.	Fail
SibSp	3.7414088465715596e-06	21.392968094764136	Significantly different distributions from real data.	Fail
Parch	4.2795293916982664e-05	16.74320318265976	Significantly different distributions from real data.	Fail
Fare	5.0640476230184647e-73	326.68643198538064	Significantly different distributions from real data.	Fail

**User Name:** Aaryan Agarwal  
**User ID:** 21016  
**Tool Used:** Gretel  
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## Chi-Square Test Results:

Variable	p-value	Chi2 Statistic	Inference	Result
Survived	0.5068543903161106	0.44055564653369533	Sig. association between the two variables (similar)	Pass
Ticket	3.5435223047565303e-07	104255.5319669959	No association between the two variables.	Fail
Sex	0.8925041413931792	0.018261808899252534	Sig. association between the two variables (similar)	Pass
Cabin	0.16315724393042344	1821.25	Sig. association between the two variables (similar)	Pass
Name	0.31625643680525556	361746.0000000001	Sig. association between the two variables (similar)	Pass
Embarked	0.17075230342654243	6.406891883591322	Sig. association between the two variables (similar)	Pass





**User Name:** Aaryan Agarwal

**User ID:** 82496

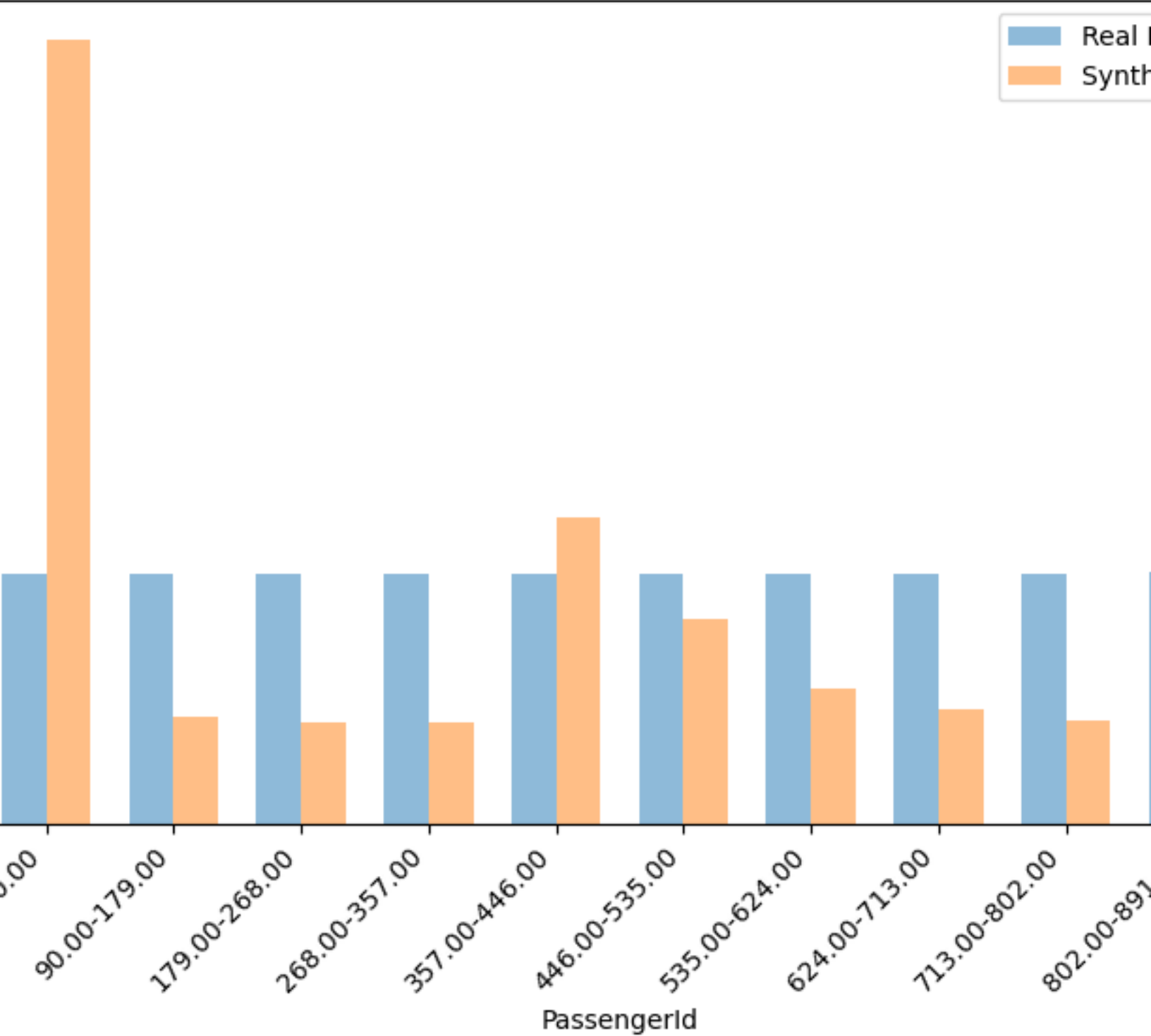
**Tool Used:** Gretel

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PassengerId Distribution Comparison



**User Name:** Aaryan Agarwal

**User ID:** 90114

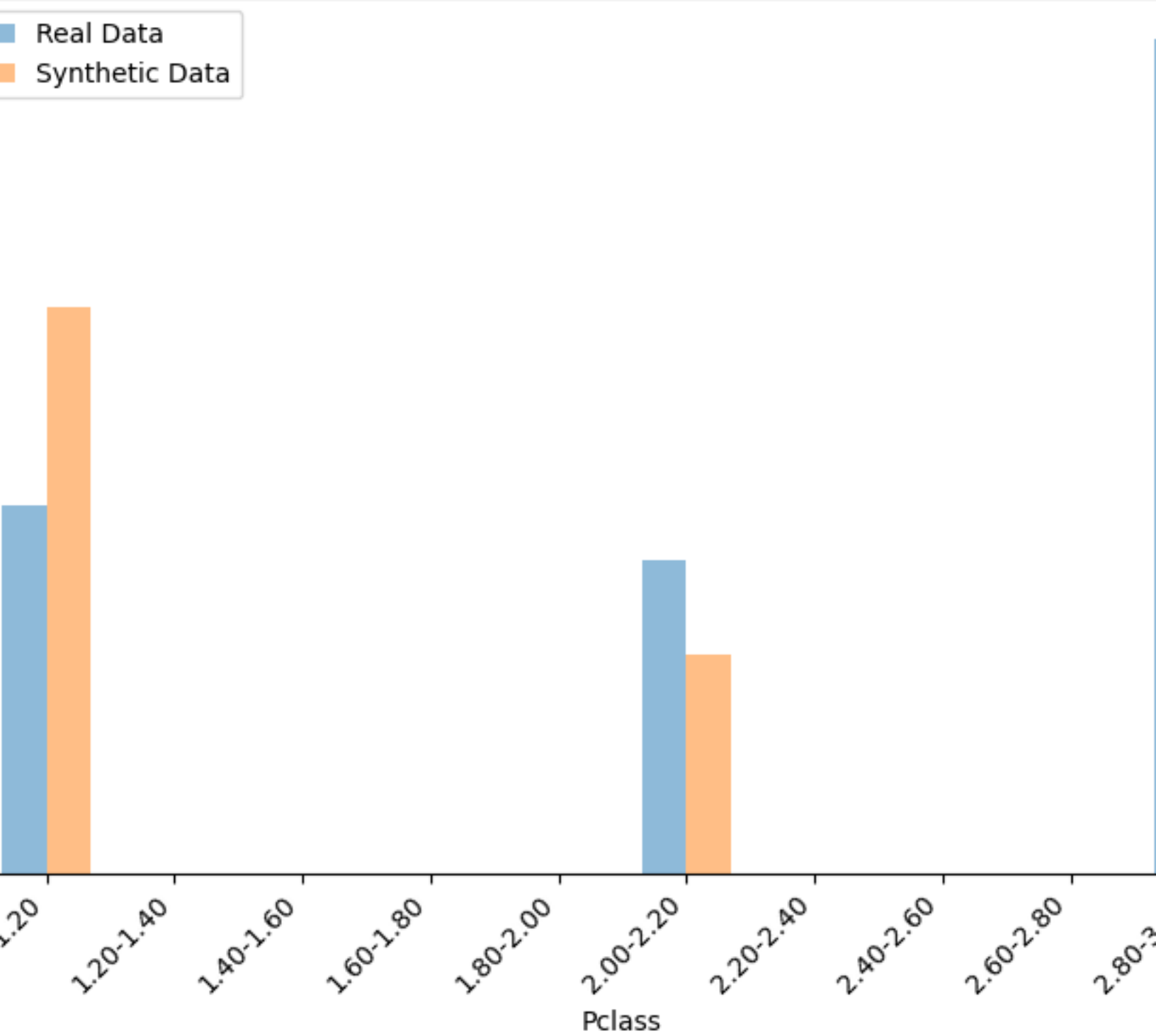
**Tool Used:** Gretel

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Pclass Distribution Comparison



**User Name:** Aaryan Agarwal

**User ID:** 46233

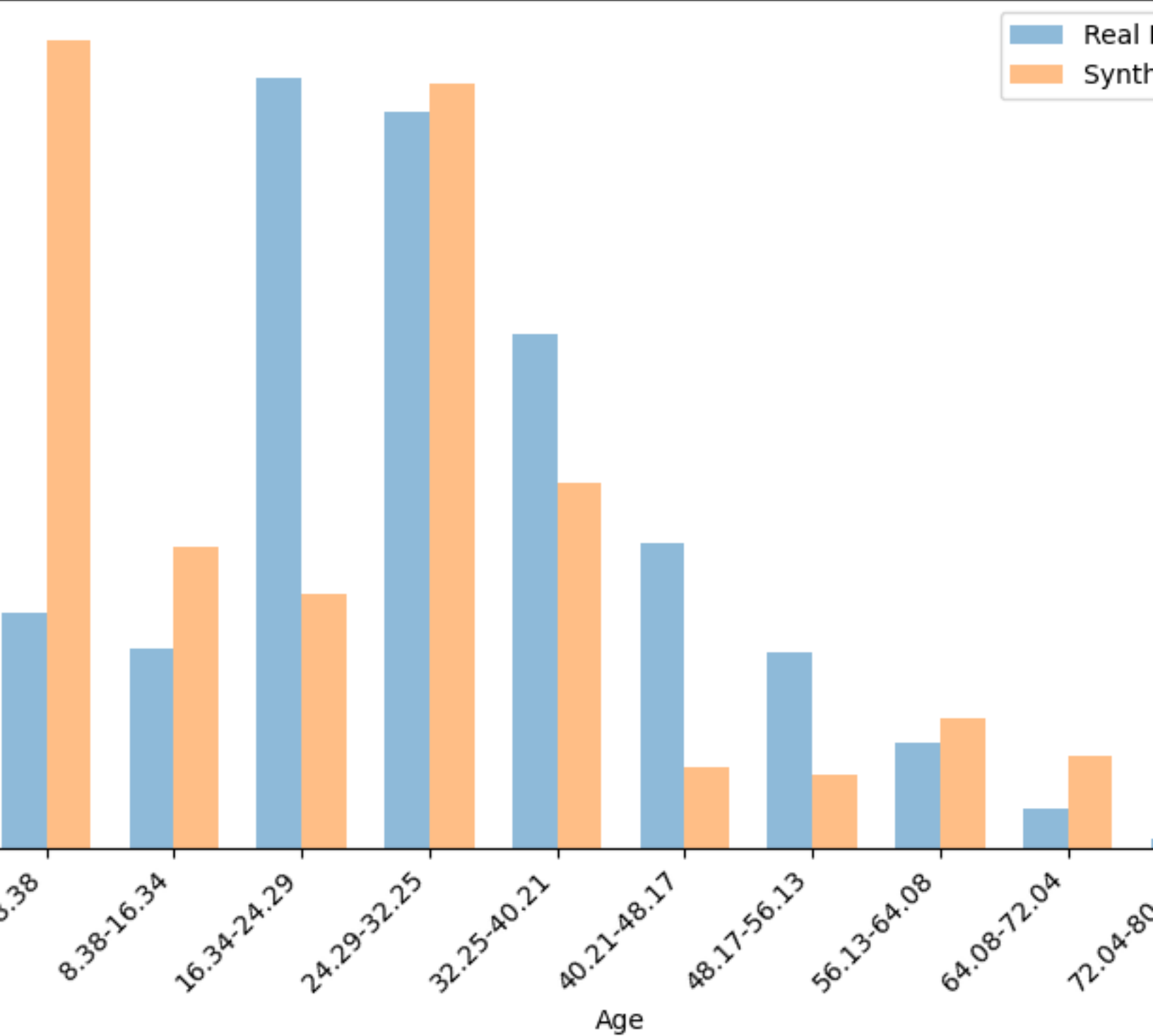
**Tool Used:** Gretel

**Execution Start Time:** 2023-09-18 12:54:22

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Age Distribution Comparison



**User Name:** Aaryan Agarwal

**User ID:** 41043

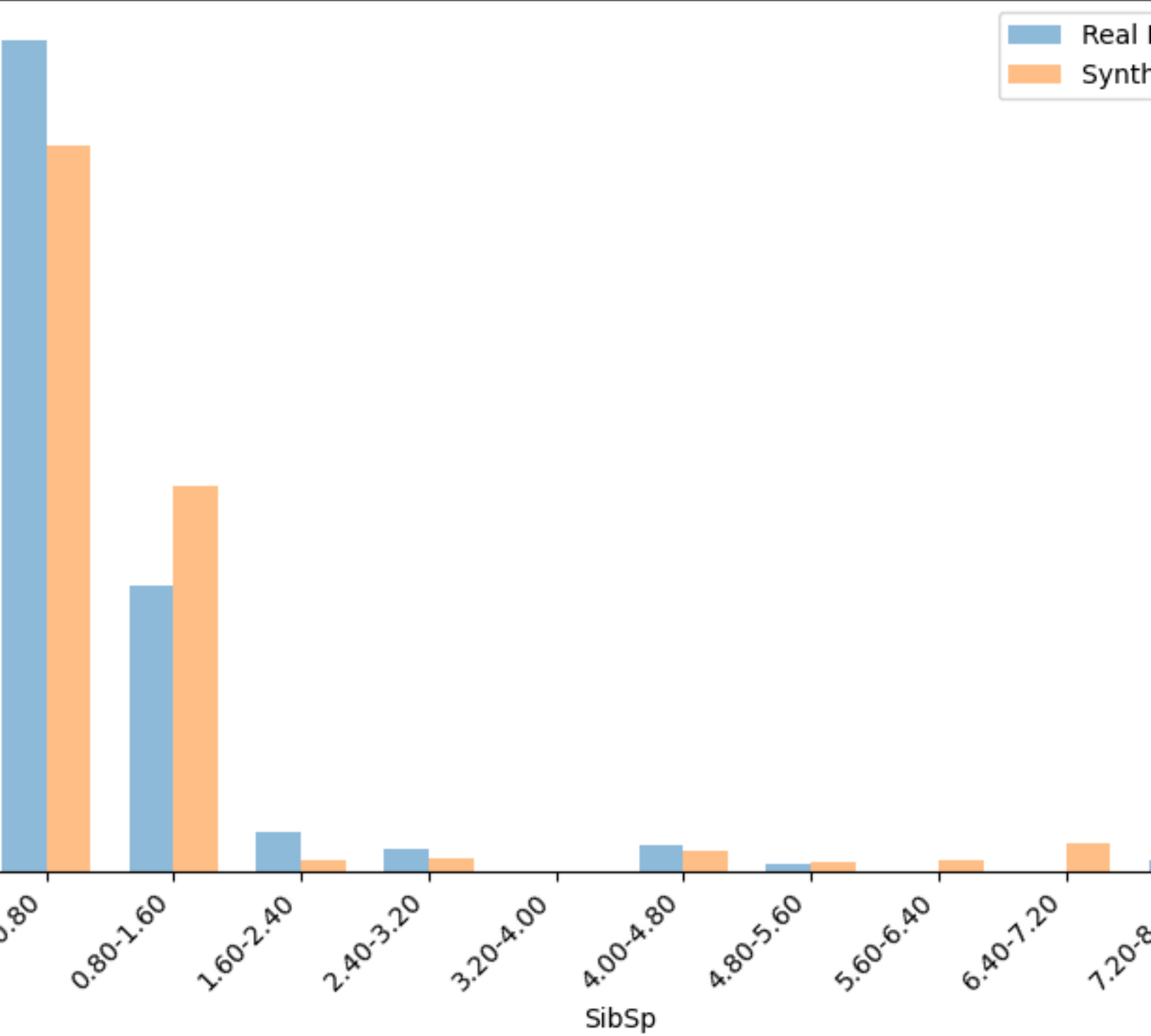
**Tool Used:** Gretel

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SibSp Distribution Comparison





**User Name:** Aaryan Agarwal

**User ID:** 84663

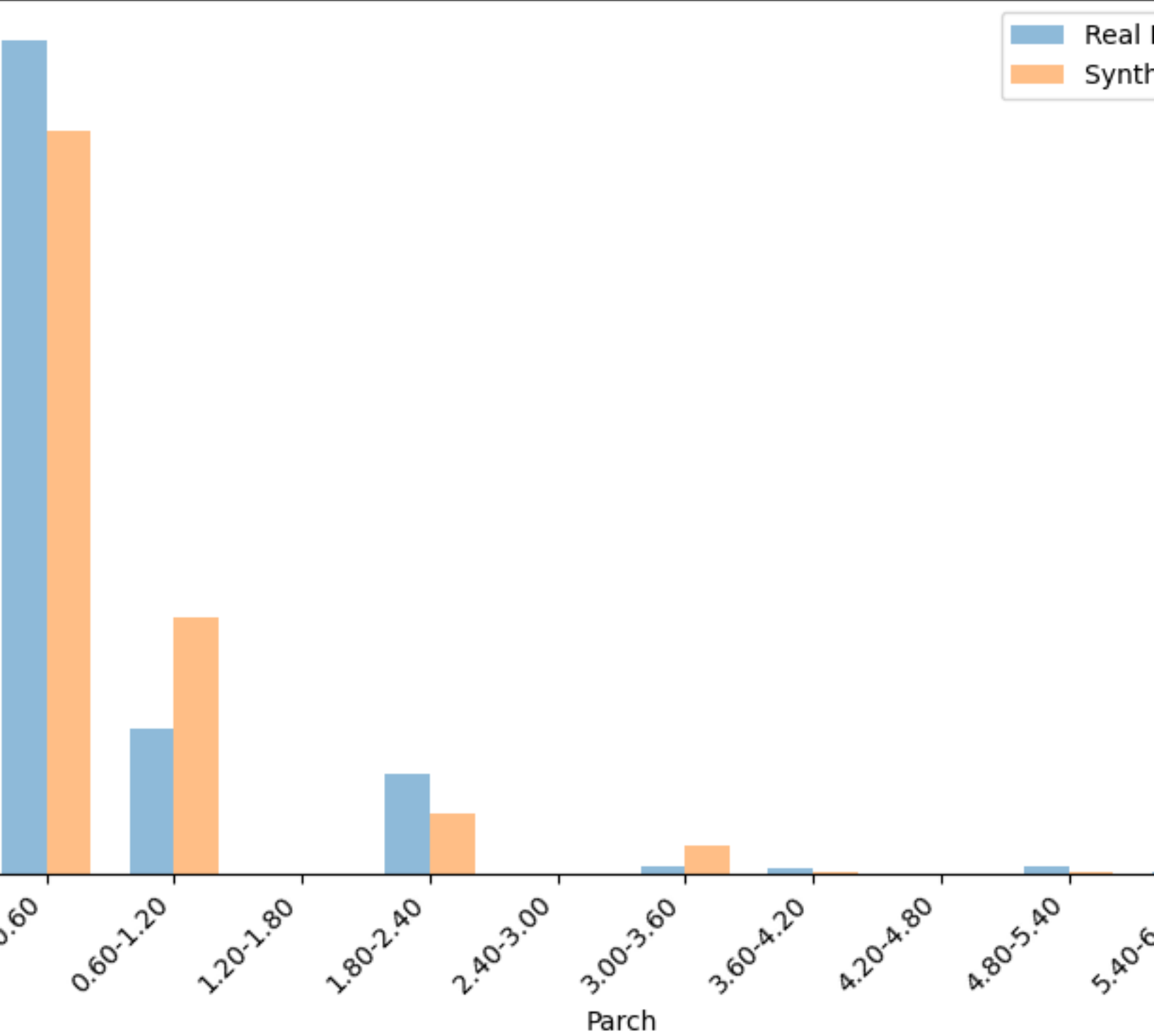
**Tool Used:** Gretel

**Execution Start Time:** 2023-09-18 12:54:22

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Parch Distribution Comparison



**User Name:** Aaryan Agarwal

**User ID:** 88155

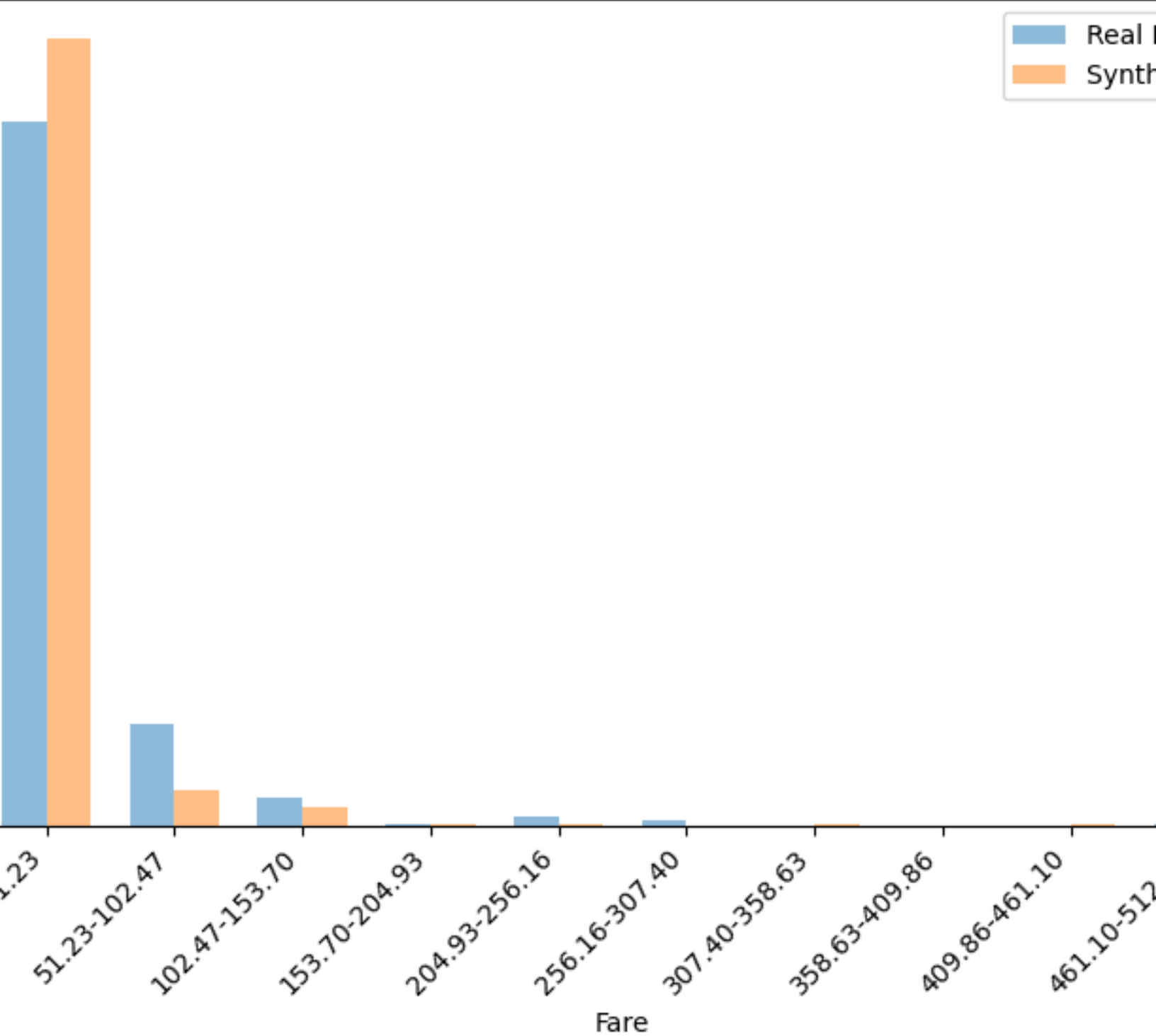
**Tool Used:** Gretel

**Execution Start Time:** 2023-09-18 12:54:22

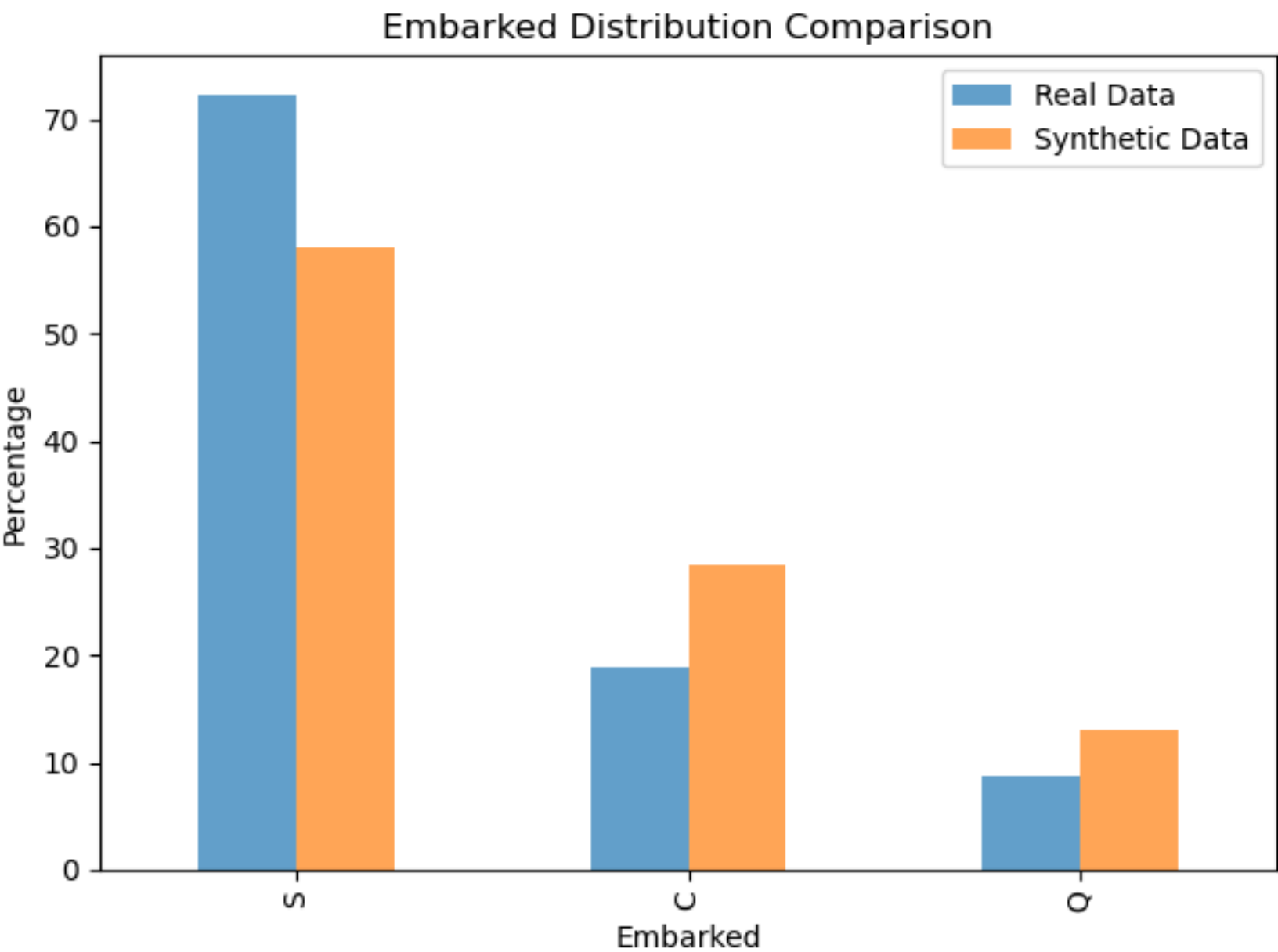
**Execution End Time:** 2023-09-18 12:54:22

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Fare Distribution Comparison

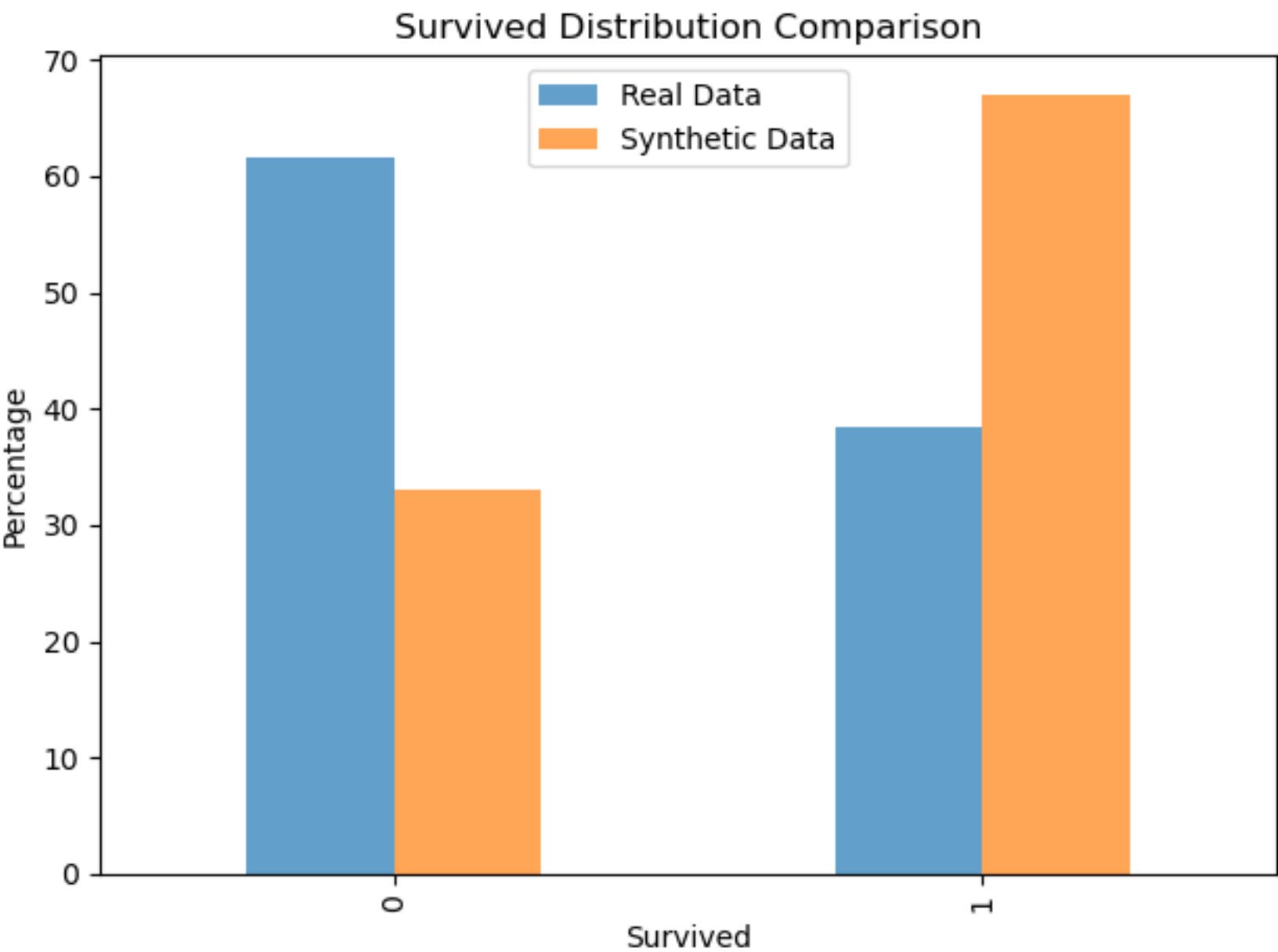


User Name: Aaryan Agarwal  
User ID: 49195  
Tool Used: Gretel  
Execution Start Time: 2023-09-18 12:54:22  
Execution End Time: 2023-09-18 12:54:22



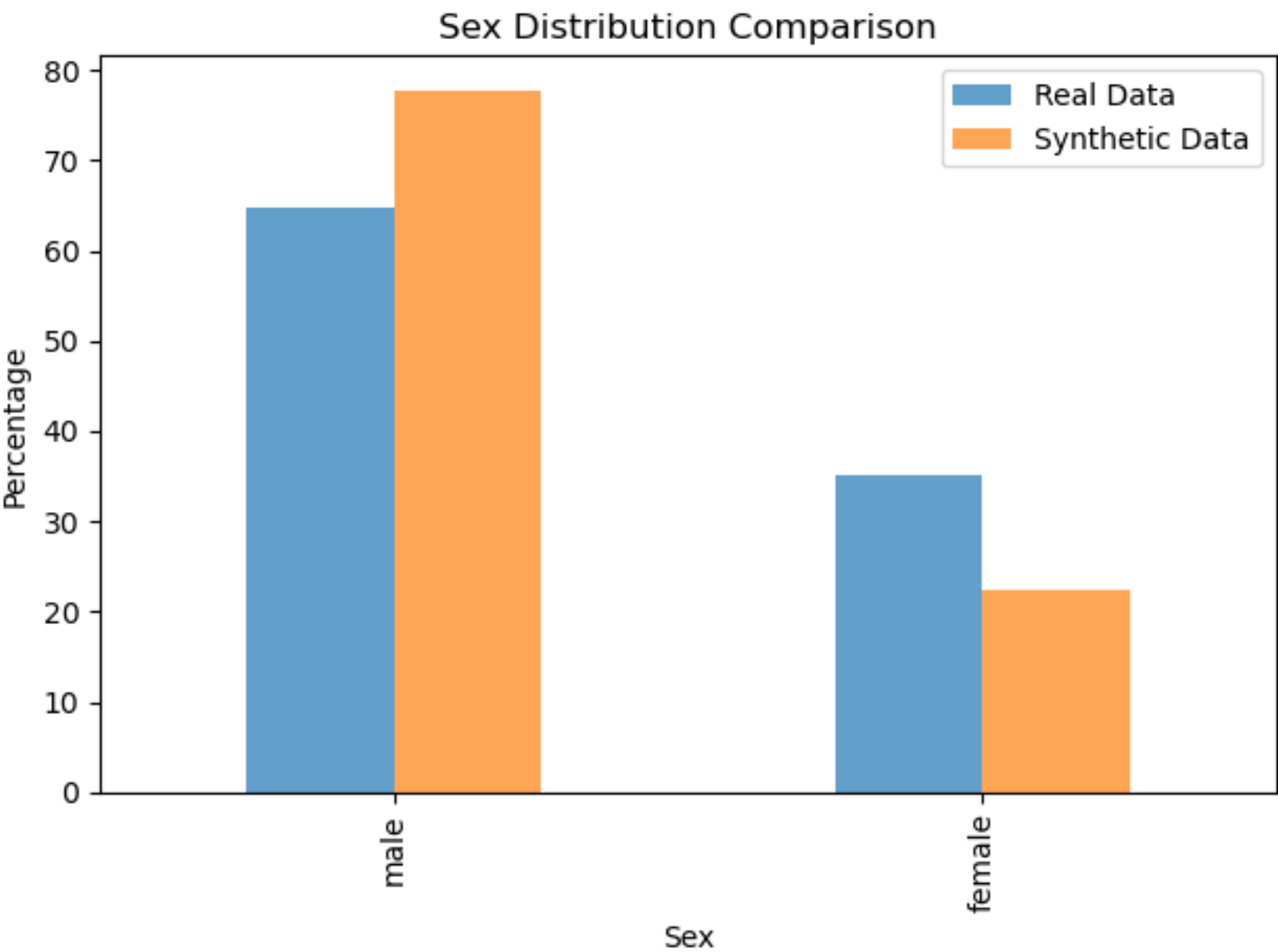
User Name: Aaryan Agarwal  
User ID: 27167  
Tool Used: Gretel  
Execution Start Time: 2023-09-18 12:54:22  
Execution End Time: 2023-09-18 12:54:22

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User Name: Aaryan Agarwal  
User ID: 82372  
Tool Used: Gretel  
Execution Start Time: 2023-09-18 12:54:22  
Execution End Time: 2023-09-18 12:54:22

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**User Name:** Aaryan Agarwal

**User ID:** 29421

**Tool Used:** Gretel

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## **PCA: Real vs. Synthetic Data**



PCA: Real vs. Synthetic Data

