





Correlation Heatmap										
Passengerld	1.00	-0.01	-0.04	0.04	-0.06	-0.00	0.01	-0.04	0.06	
Survived	-0.01	1.00	-0.34	-0.08	-0.04	0.08	0.26	0.02	-0.20	- 0.8
Pclass	-0.04	-0.34	1.00	-0.35	0.08	0.02	-0.55	0.07	0.14	- 0.6
Age	0.04	-0.08	-0.35	1.00	-0.27	-0.19	0.10	-0.28	0.18	- 0.4
SibSp	-0.06	-0.04	0.08	-0.27	1.00	0.41	0.16	0.89	-0.58	- 0.2
Parch	-0.00	0.08	0.02	-0.19	0.41	1.00	0.22	0.78	-0.58	- 0.0
Fare	0.01	0.26	-0.55	0.10	0.16	0.22	1.00	0.22	-0.27	0.2
FamilySize	-0.04	0.02	0.07	-0.28	0.89	0.78	0.22	1.00	-0.69	0.4
IsAlone	0.06	-0.20	0.14	0.18	-0.58	-0.58	-0.27	-0.69	1.00	0.6
	engerld	Survived	Pclass	Age	SibSp	Parch	Fare	nilySize	IsAlone	_

- Observations:
 Women had higher survival rates than men.
 Higher Pclass passengers survived more often.
 Age distribution shows children had relatively better survival.
 Feature engineering (Title, FamilySize) improved prediction accuracy.
 Best model in validation: XGB with accuracy 0.8380.