

# Data Pipeline Report

File: churn.csv | Timestamp: 2025-08-23T21:24:13.425509

## 1. Data Validation Summary

Total Rows	100
Total Columns	14
Missing Values Found	0
Duplicate Rows Found	0

## 2. Feature Engineering Summary

**Columns Dropped:** RowNumber, CustomerId, Surname

**Columns Created:** BalanceSalaryRatio, TenureByAge, CreditScoreGivenAge

## 3. Exploratory Data Analysis

*Correlation Heatmap*



## 4. Final Processed Data

Shape of Final DataFrame: (100, 15)

**Processed DataFrame Head:**

CreditScore	Age	Tenure	Balance	NumOfProducts	HasCrCard	IsActiveMember
-0.49	-0.43	1.36	0.06	-0.15	0.87	1.02
1.29	-0.91	0.25	0.55	-1.37	0.87	-0.98
0.54	-1.29	-0.86	0.61	-1.37	-1.15	-0.98
-0.22	-0.24	-1.6	-1.19	-1.37	0.87	1.02
-0.33	-0.15	1.36	1.2	1.08	0.87	1.02