### **Behavioral Analysis Report**

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### **Executive Summary**

This report presents a comprehensive analysis of behavioral and physiological data using clustering and principal component analysis (PCA). The analysis identified distinct behavioral patterns and their relationships with physiological characteristics.

### **Cluster Analysis Results**

#### Cluster Analysis in PCA Space

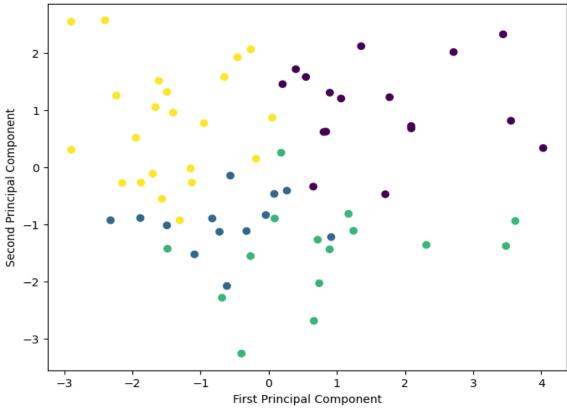


Figure: Cluster Pca

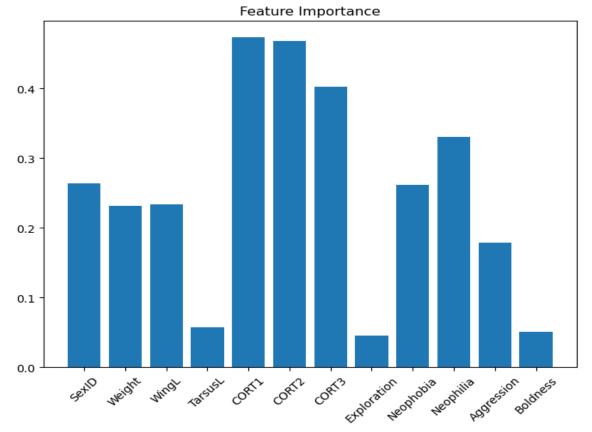


Figure: Feature Importance

### Distribution of First Principal Component by Cluster

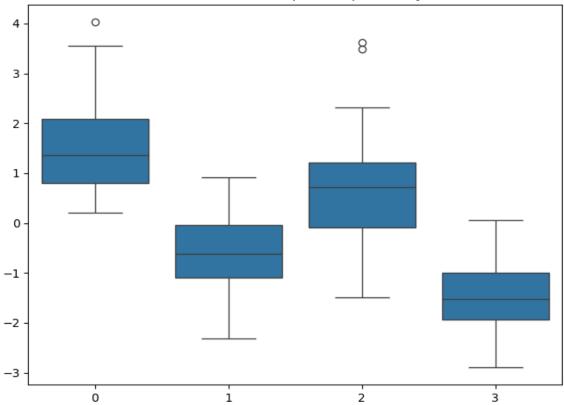


Figure: Detailed Analysis

# **Statistical Analysis**

## PCA Variance Explained

Component	Variance Explained
PC1	0.228
PC2	0.150
PC3	0.118
PC4	0.101
PC5	0.083

#### **Cluster Statistics**

SexID	Weight	WingL	TarsusL	CORT1	CORT2	CORT3	Exploratio	Neophobia	Neophilia	Aggression	Boldness
-0.16	-0.10	-0.02	0.40	0.68	0.92	0.87	-0.25	1.09	0.64	0.00	-0.45
-0.52	0.29	-0.86	0.20	-0.57	-0.48	-0.52	-0.08	-0.35	-0.63	-0.55	0.27
-0.59	-0.88	-0.45	-0.90	0.61	-0.09	0.01	0.09	-0.62	0.56	-0.30	0.49
0.83	0.51	0.83	0.19	-0.60	-0.36	-0.37	0.18	-0.22	-0.50	0.52	-0.14