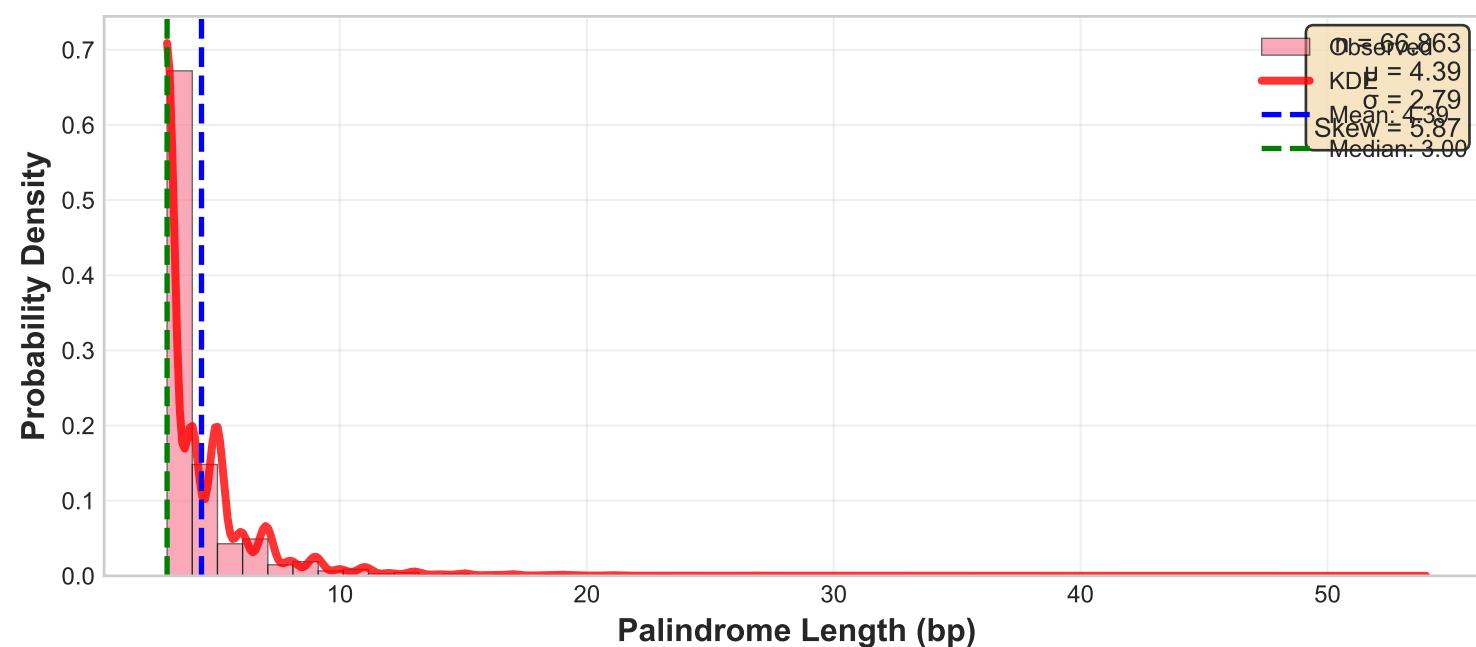
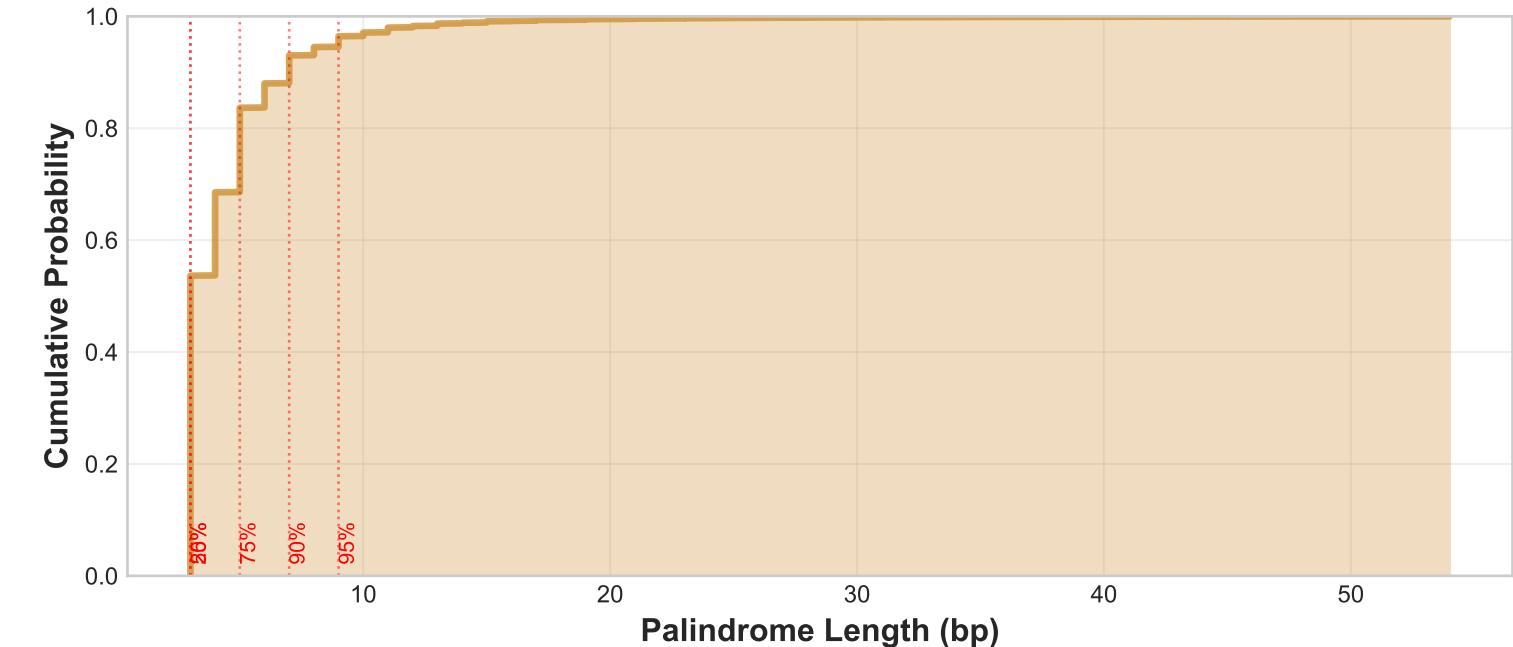


Palindrome Analysis: Length Distribution and Statistical Properties

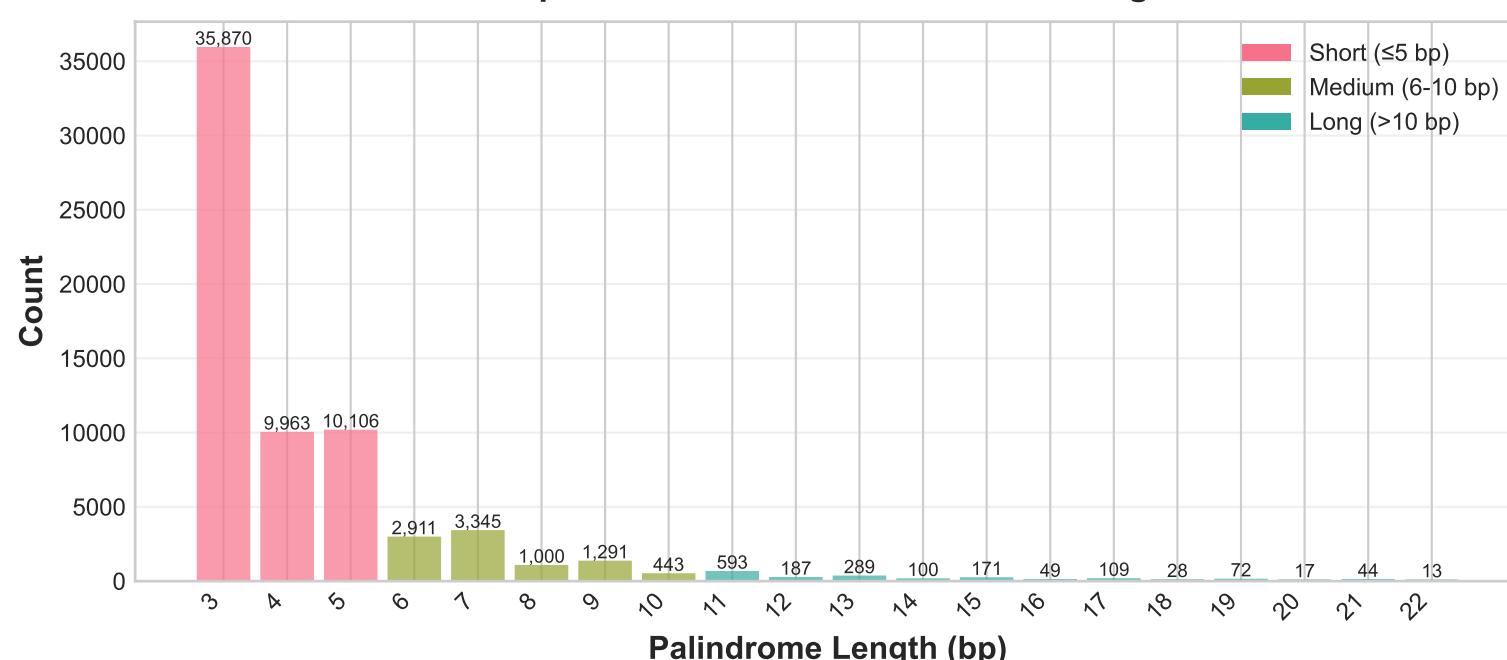
A. Palindrome Length Distribution with Kernel Density Estimate



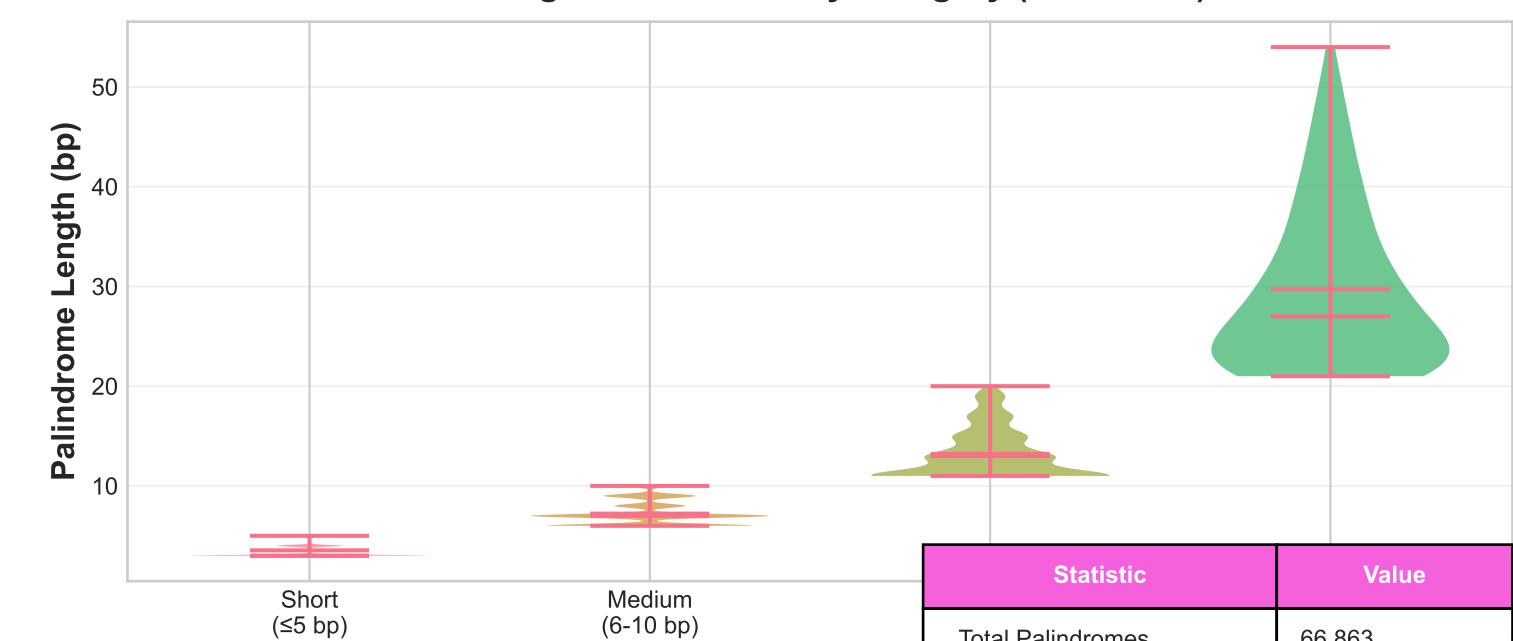
B. Cumulative Distribution Function with Percentiles



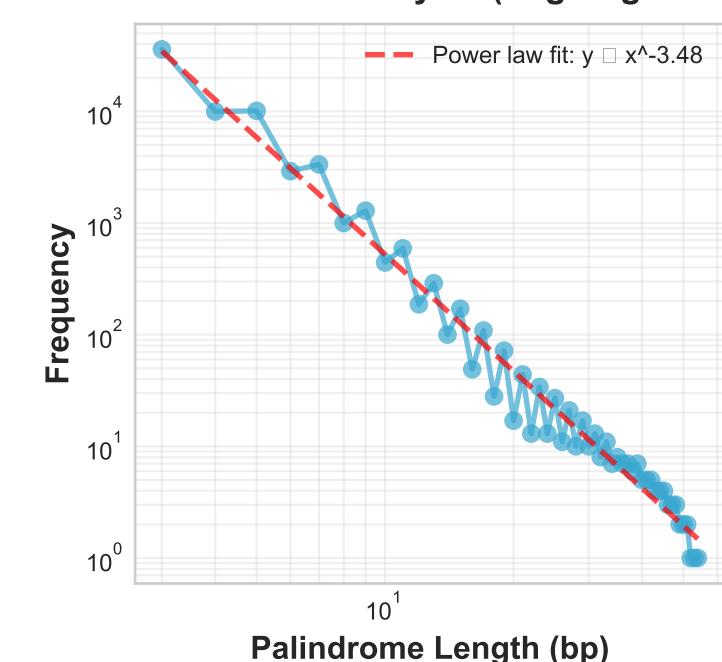
C. Top 20 Most Common Palindrome Lengths



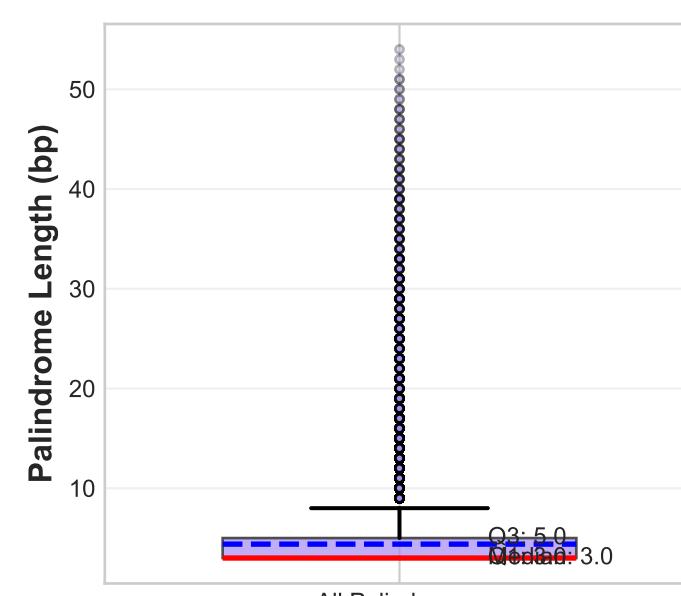
D. Length Distribution by Category (Violin Plot)



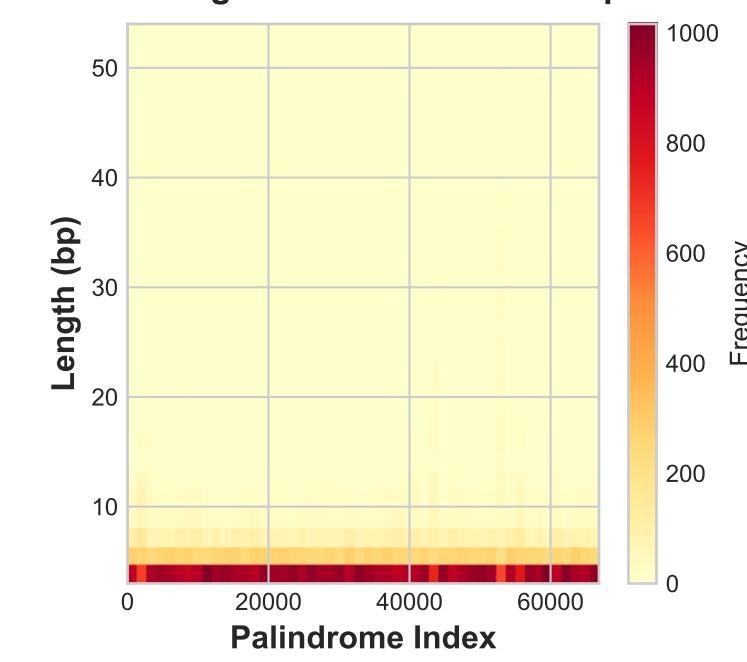
E. Power Law Analysis (Log-Log Scale)



F. Box Plot with Outlier Detection



G. Length Distribution Heatmap



H. Comprehensive Statistics Summary

Statistic	Value
Total Palindromes	66,863
Unique Lengths	52
Min Length	3 bp
Max Length	54 bp
Mean Length	4.39 bp
Median Length	3.00 bp
Std Dev	2.79 bp
Variance	7.77
Skewness	5.868
Kurtosis	57.984
Q1 (25%)	3.0 bp
Q3 (75%)	5.0 bp
IQR	2.0 bp
95th Percentile	9.0 bp
99th Percentile	15.0 bp