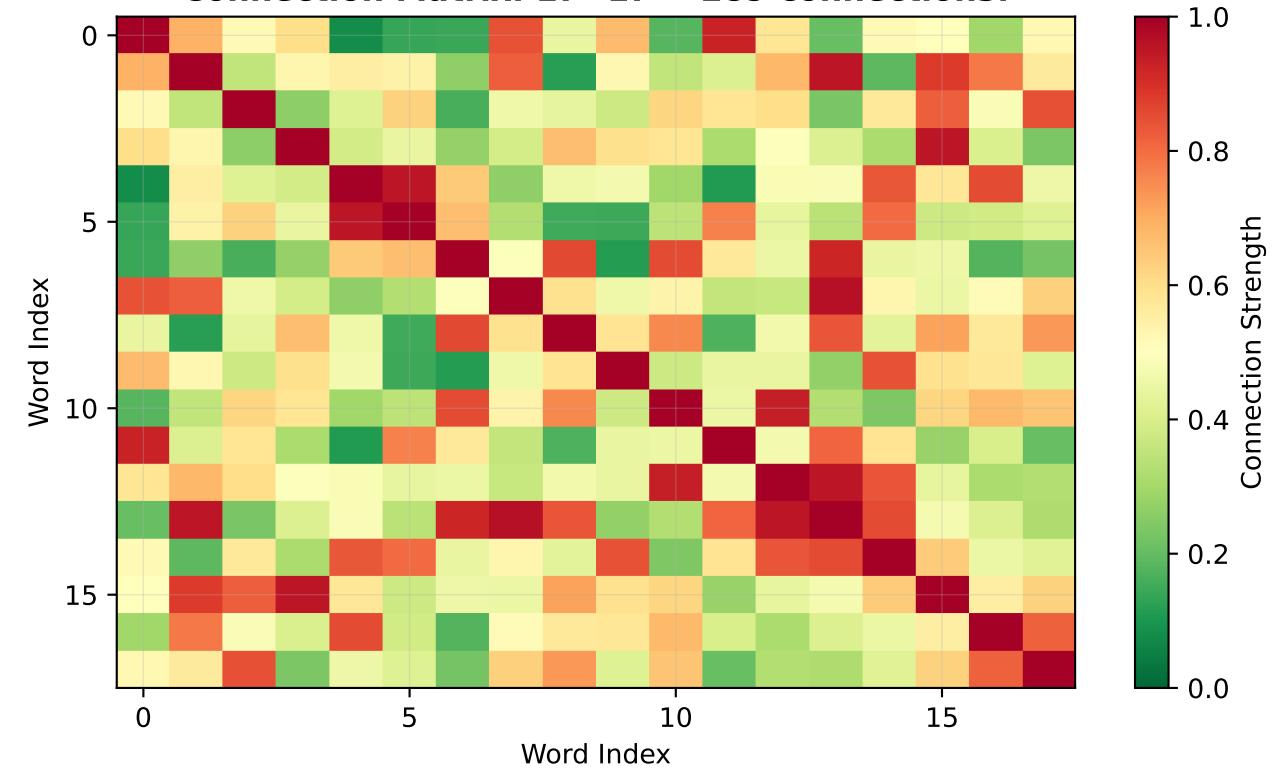
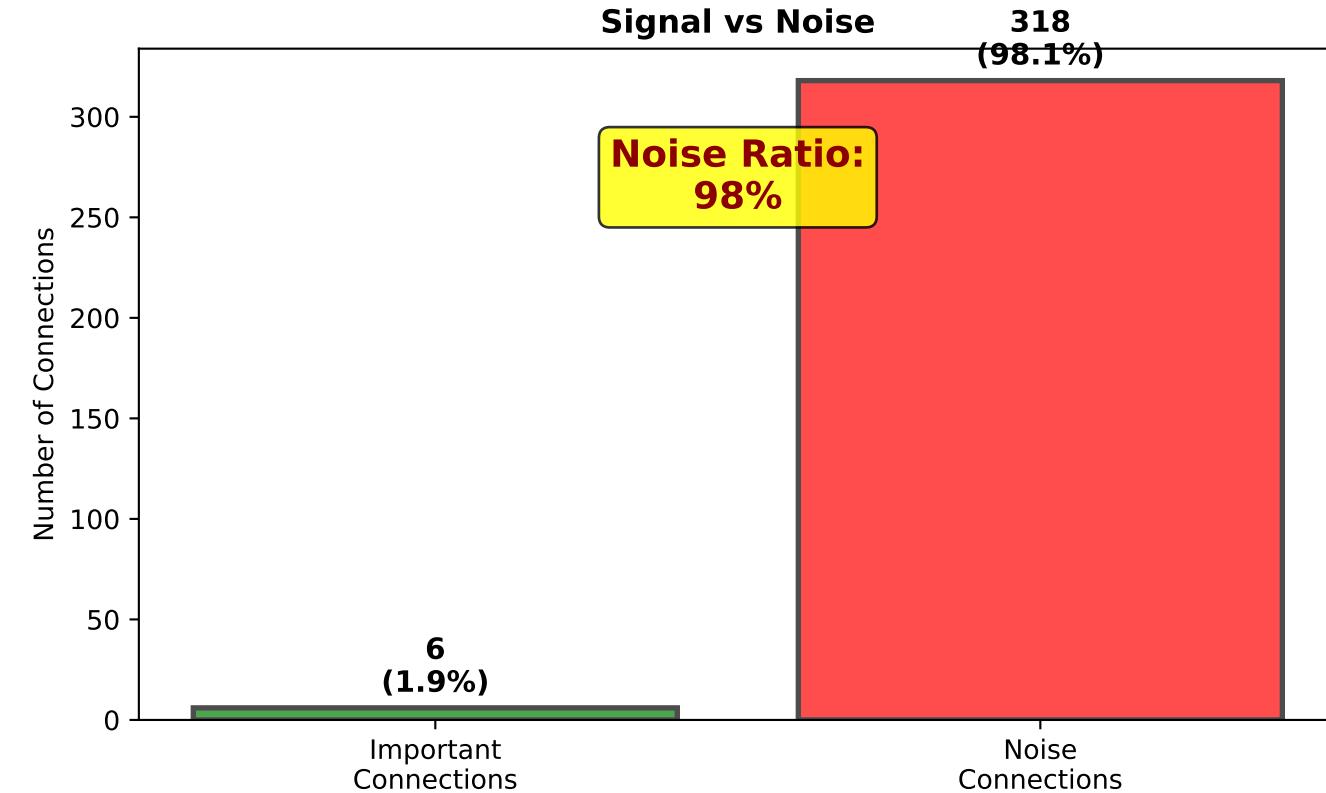


FAILURE: Signal Lost in Noise (Long Sentences)

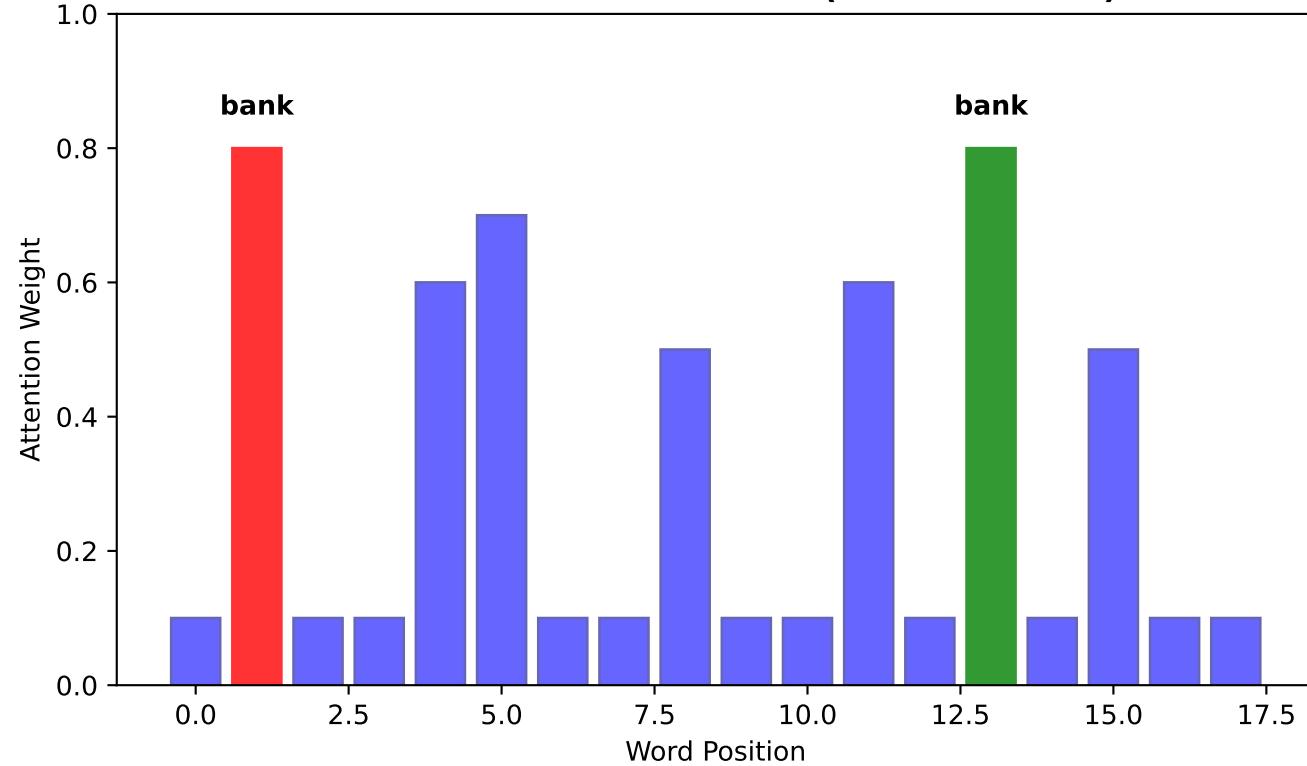
Connection Matrix: $17 \times 17 = 289$ connections!



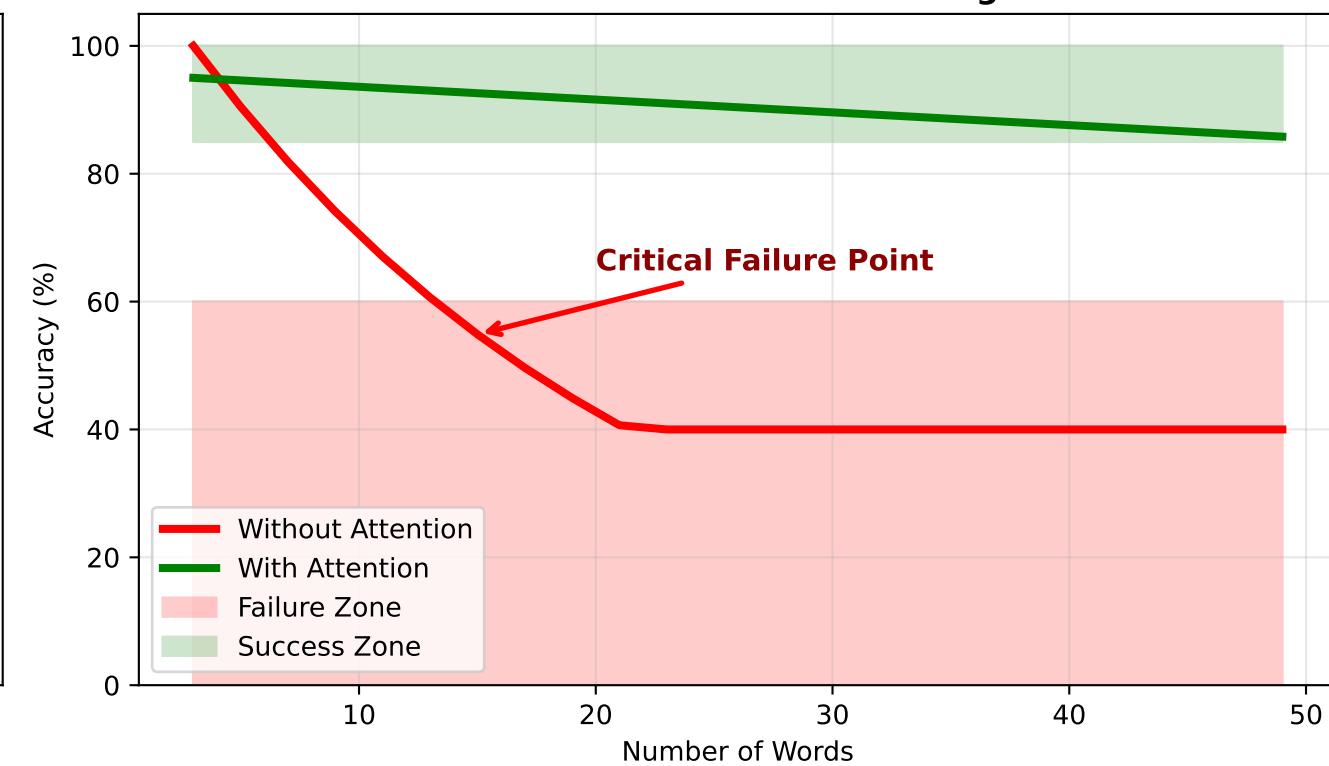
Signal vs Noise



Ideal Attention Distribution (What We Need)



Performance vs Sentence Length



Key Problem: Without selective attention, important connections are drowned in noise.
Example: "The bank agreed to provide a loan for the house by..." has 324 possible connections but only ~6 matter!