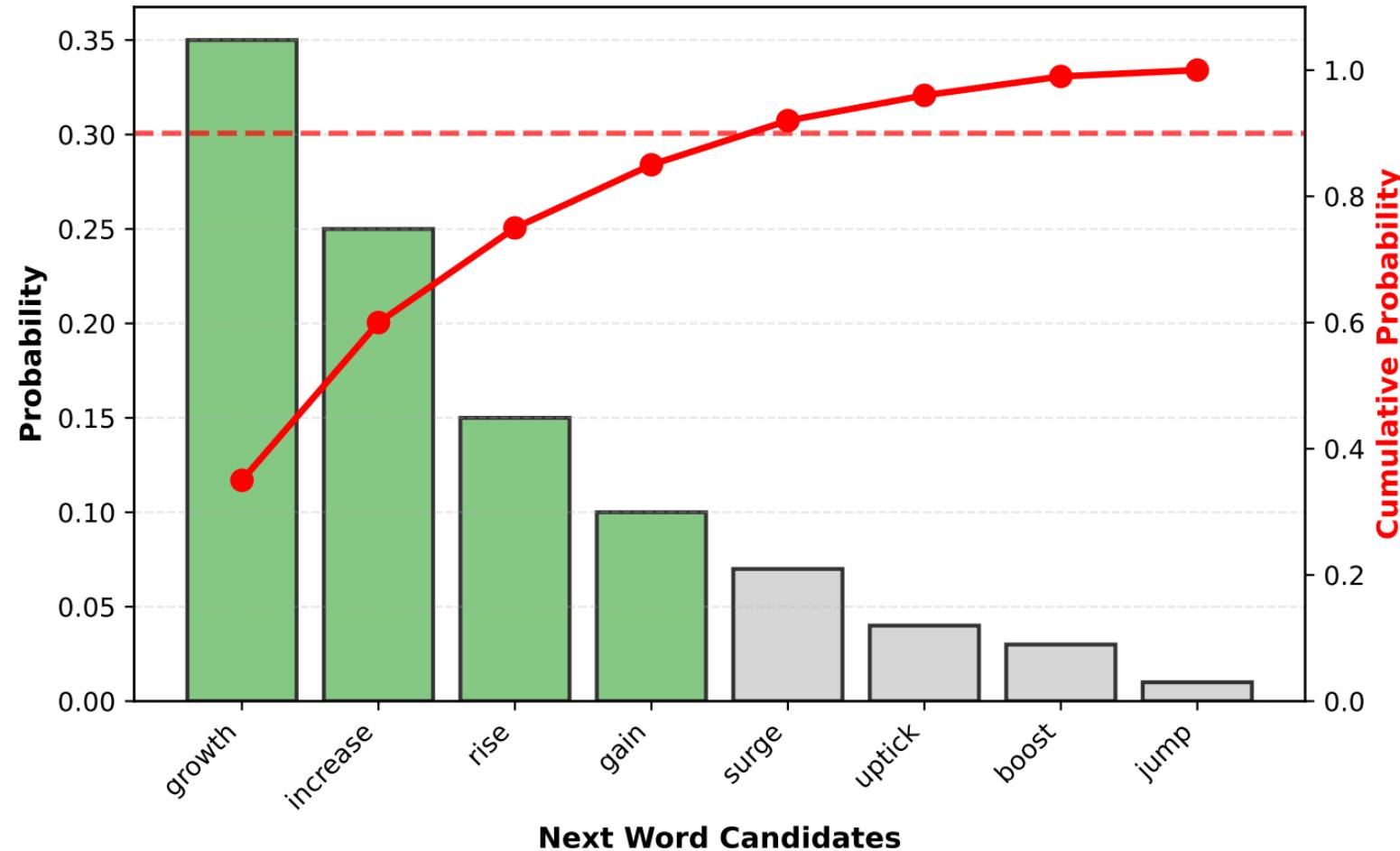


## Nucleus (Top-p=0.9) Sampling



Top-p Algorithm:

1. Sort words by probability
2. Compute cumulative sum
3. Include words until  $\sum \geq p$  (0.9)
4. Sample from included set

Result: Dynamic vocabulary size

- Peaked distribution  $\rightarrow$  few words
- Flat distribution  $\rightarrow$  many words

Included (green): Top 90% probability

Excluded (gray): Bottom 10% (too unlikely)