

## Nucleus Sampling

$P(y \mid \text{they live in a remote desert by})$

0.01 roads

0.01 towns

0.01 people

0.005 streets

→ renormalize and sample

~~~~~ cut off after  $p\%$  of probability mass

- Define a threshold  $p$ . keep the most probable options accounting for  $p\%$  of probability mass (the nucleus), then sample among these.
  - To implement: Sort options by probability, truncate the list once the total exceeds  $p$ , then renormalize and sample from it.
- \* Decent perplexity, doesn't have bad repetitions like greedy/beam search