



Green Eggs and Ham

A bigram language model

LLMs
Unplugged

A bigram language model derived from *Green Eggs and Ham* by Dr Seuss

© 1970 Ben Swift

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First Edition

Text frequency counts from the text *Green Eggs and Ham* by Dr Seuss, available from https://en.wikipedia.org/wiki/Green_Eggs_and_Ham.

Credits: designed and built by Ben Swift for the Cybernetic Studio. Typeset in Libertinus using Typst. Create your own n-gram model booklet using the online tools at <https://www.llmsunplugged.org/tools>. The source code (v1.4.7) for the tool used to create this model is available under an MIT Licence from <https://github.com/ANUcybernetics/llms-unplugged>.

Model statistics

- **Total tokens:** 993
- **Unique tokens (vocabulary):** 56
- **Unique previous-words contexts:** 56
- **Entropy:** 1.8 bits/token — how unpredictable each dice roll is
- **Perplexity:** 3.5 — effective number of choices per dice roll

Disclaimer: this reference contains a statistical language model derived from text corpus analysis. The patterns within represent probabilistic relationships between words in that text. Any new texts generated by sampling from this language model are statistical in nature and may not always reflect proper grammar, factual accuracy, or appropriate content.

How to use this book

This book contains a bigram language model for generating text using only one or more d10 (ten-sided) dice and a pen and paper to write down the generated text, according to the following algorithm.

Algorithm

To generate new text using the bigram model in this book:

1. **choose a starting word**—pick any bold word from the book (note that punctuation e.g. $\square$ count as words in this model) and write it down
2. **look up the word's entry** (i.e. use this book like a dictionary) to find all possible *next* words according to the model
3. **roll your d10s** (if required): check for diamonds next to the word—this shows how many d10s to roll (e.g., **the ♦♦** means roll 3 d10s). If there are no diamonds, there's only one possible next word—skip to step 5. Read the dice from left to right as a single number (e.g., rolling 2, 1 and 7 means your roll is 217)
4. **find your next word**: scan through the next-word options until you find the first number $\geq$ your roll, or just use the single word if no dice were rolled (write it down)
5. repeat from step 2 using this word as your new word, continuing this loop until you reach a natural stopping point (like $\square$) or reach your desired text length

Example 1: single d10

Your current word is “**cat**” and its entry shows:

cat 4|sat 7|ran 10|slept

- one diamond (♦) means roll 1 d10
- roll your dice: roll a 6
- find the next word: first number ≥ 6 is 7|ran, so next word is “ran”
- write it down, look it up and continue the process

Example 2: multiple d10s

Your current word is “**the**” and its entry shows:

the ♦♦ 33|cat 66|dog 99|end

- two diamonds (♦♦) means roll 2 d10s
- roll your dice: roll 5 and 8 $\rightarrow$ combine them to get 58
- find the next word: first number ≥ 58 is 66|dog, so next word is “dog”
- write it down, look it up and continue the process

! ♦♦ 27|I 37|not 45|a
54|would 62|you 67|and
72|Thank 75|could 78|eat
80|here 83|If 86|in 88|let
91|Sam 94|so 96|that 99|try

, ♦♦ 27|Sam 52|could 64|in
72|with 79|would 84|I 89|on
94|you 97|so 99|will

. ♦♦ 44|I 58|not 70|and
75| 81|would 86|you 89|say
91|Sam 94|try 95|a 96|could
97|so 98|that 99|they

? ♦♦ 50|I 62|not 74|would
80|could 87|eat 93|here 99|in

a ♦♦ 14|house 27|mouse
41|train 53|box 65|car 77|fox
87|tree 94|goat 99|boat

am ♦♦ 62| 87|! 99|Sam

and ♦♦ 42|ham 69|I 80|in
88|you 91|he 95|on 99|there

anywhere ♦ 7| 9|!

are ♦ 5| 9|so

be ♦ 5|! 7| 9|

boat ♦ 6| 9|?

box ♦ 8| 9|?

car ♦ 4|! 8| 9|?

could ♦♦ 57|not 99|you

dark ♦ 4| 6|! 9|?

do ♦♦ 94|not 96|! 99|so

eat ♦♦ 91|them 99|green

eggs and

fox ♦ 8| 9|?

goat ♦ 5| 7|! 9|?

good ,

green eggs

ham ♦♦ 54| 81|! 99|?

he tries

here ♦♦ 72|or 81|and 90|in
99|they

house ♦ 8| 9|?

I ♦♦ 40|do 59|am 78|will
94|would 97|like 98|could
99|say

If you

in ♦♦ 72|a 99|the

let me

like ♦♦ 77|them 97|green
99|that

may ♦ 5|like 7| 9|

me be

mouse ♦ 8| 9|?

not ♦♦ 42|like 60| 78|in
91|eat 97|with 99|on

on a

or there

rain ♦ 7| 9|?

Sam ♦♦ 73|I 83|! 94|
99|

say ♦ 5|! 9|

see ♦ 7| 9|!

so ♦ 4|good 5|I 7|like 9|you

Thank you

that Sam

the ♦♦ 63|dark 99|rain

them ♦♦ 23|in 41|with
57| 71|here 84|anywhere
91|! 97| 99|and

there ♦ 8| 9|?

they are

train ♦ 6|! 8| 9|?

tree ♦ 5|! 9|

tries them

try them

will ♦♦ 47|not 83|eat
94|see 99|try

with a

would ♦♦ 48|not 92|you
99|eat

you ♦♦ 29| 41|like
52|may 61|let 67|? 73|do

79|eat 84|see 90|will 93|!
96|on 99|say