

# Introduction to Language Modeling

# Building Intuition

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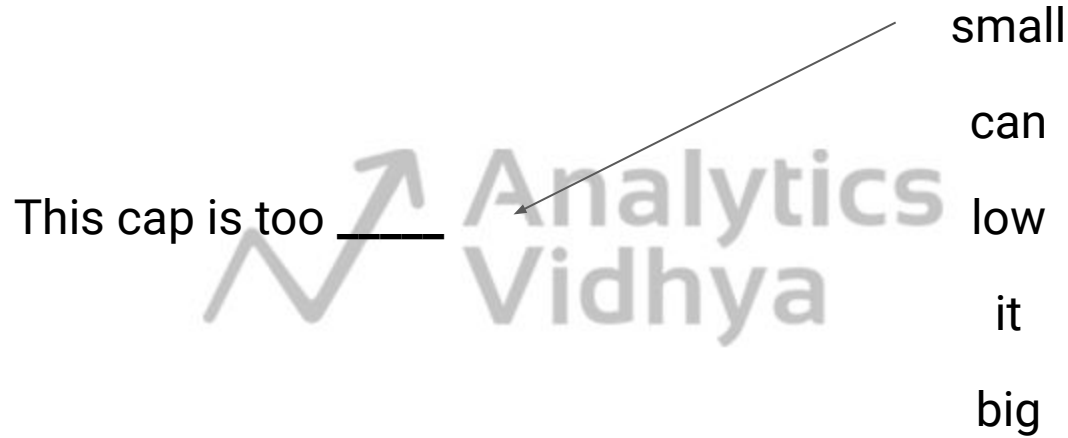
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# Building Intuition

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# What is Language Modeling?

- A Language Model finds the probability of a phrase or a sentence.

*probability of sentence,  $P(S) = P(w_1, w_2, w_3, \dots, w_n)$*



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- **Probability of a sentence:** How likely is it to occur in natural language.
- It can also be used to compute the probability of upcoming words.

$P(w_5 | w_1, w_2, w_3, w_4)$

# Topics to Cover

- Applications of language modeling



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- Applications of language modeling
- N-gram language models



# Topics to Cover

- Applications of language modeling
- N-gram language models
- Evaluate a language model

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# Topics to Cover

- Applications of language modeling
- N-gram language models
- Evaluate a language model
- Neural Language Models

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# Topics to Cover

- Applications of language modeling
- N-gram language models
- Evaluate a language model
- Neural Language Models
- Project: Building a next word recommendation system



Thank You