

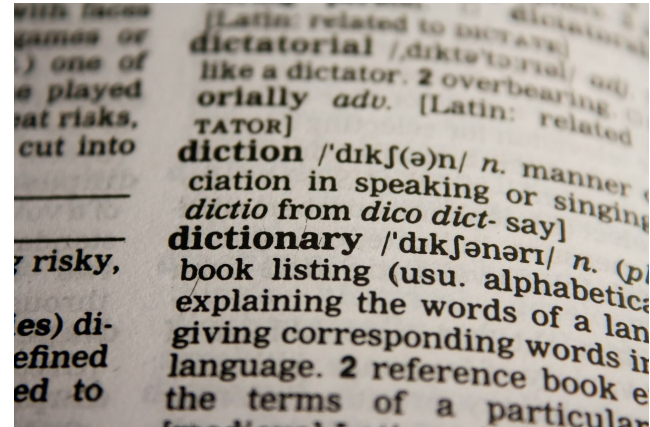
Contextual Dictionary

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Anthropic AI Hackathon by lablab.ai

Problem Statement

- Language learning can be challenging due to the time and effort required to check word definitions
- **Each word can have A LOT of meanings in different contexts**, which requires students to read through them and find the correct one
- How to find the right definition easier and faster?



Solution

- Use Large Language Models, specifically Anthropic's Claude API, to analyze text and determine the meaning of words in their contexts
- Provide simple dropdown menu to select the word to define
- Built with Python and Streamlit

Contextual Dictionary

Type in a word and the sentence where it's used and get the definition.
Powered by Claude API.

Sentence

The river overflowed the bank.

Word to Define

bank

The word "bank" in the sentence means:

n. the sloping edge of a river or stream channel

Prospects

- The tool has broad prospects for language learners, especially those learning **English as a second language (ESL)**.
- It can support language educators by providing a useful tool for their students and supplementing their vocabulary and grammar instruction.
- Since current LLMs aren't perfect, we can potentially collect usage data to provide a **word sense disambiguation (WSD) dataset**, which can be used in natural language processing (NLP) research
- Future work:
 - Clickable words and inline definition in articles
 - Human in the loop (feedback on correctness of definition)

Demo

<https://johan456789-contextual-app-db5nyo.streamlit.app/>