



The Gadfly Project

Problem

Description

How do we test text comprehension? Using questions.

Currently, questions are created manually.

Opportunity

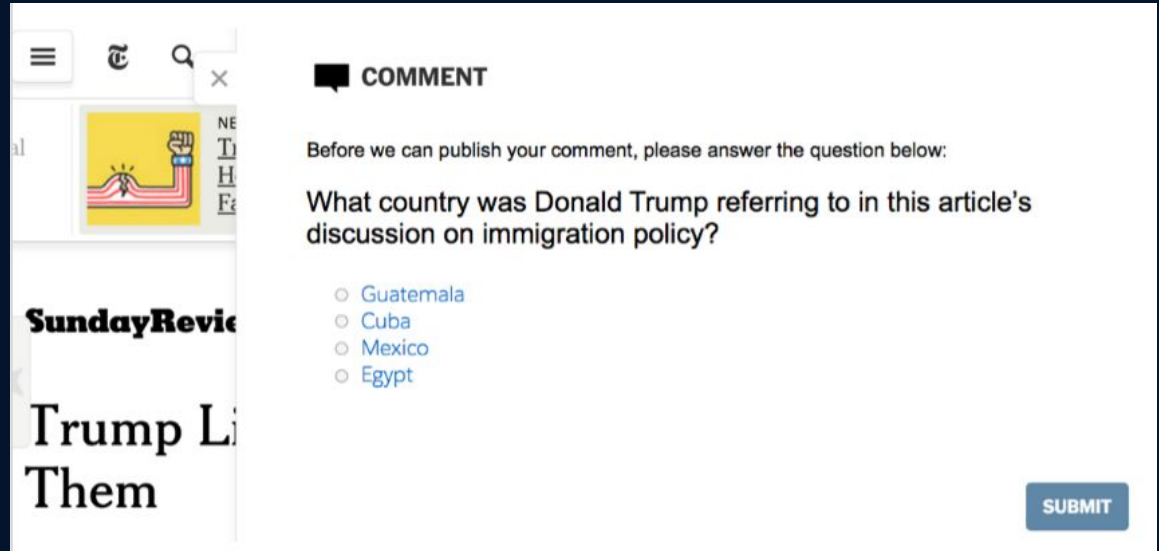
What if we could automatically generate questions from text?

Our Use Case

Comment CAPTCHA

Ask a question to distinguish those who read the article from those who did not.

Conceptual design:



The image shows a conceptual design for a comment CAPTCHA system. On the left, a partial view of a news article is visible, featuring a yellow cartoon illustration of a hand holding a torch, the title "Sunday Review", and the headline "Trump Li... Them". On the right, a "COMMENT" section is displayed. It includes a heading "COMMENT" with a speech bubble icon, followed by the instruction "Before we can publish your comment, please answer the question below:". The question is "What country was Donald Trump referring to in this article's discussion on immigration policy?". Below the question are four radio button options: "Guatemala", "Cuba", "Mexico", and "Egypt". A blue "SUBMIT" button is located at the bottom right of the comment section.

COMMENT

Before we can publish your comment, please answer the question below:

What country was Donald Trump referring to in this article's discussion on immigration policy?

- ☐ Guatemala
- ☐ Cuba
- ☐ Mexico
- ☐ Egypt

SUBMIT

Process

Understanding The Problem

Interviews to research the problem.

“Substituting question for login is plausible but need to see it in action.”

Outcome

Interested but..

“Higher quality engagement would be nice..”

Process

Understanding Readers

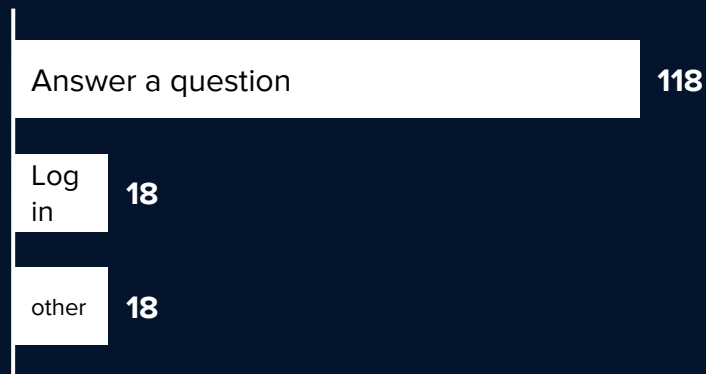
Surveys to understand people's online reading & commenting habits.

Outcome

181 responses, 82% completion.

Strong signal to follow.

Would you rather answer a question or login (to comment)?



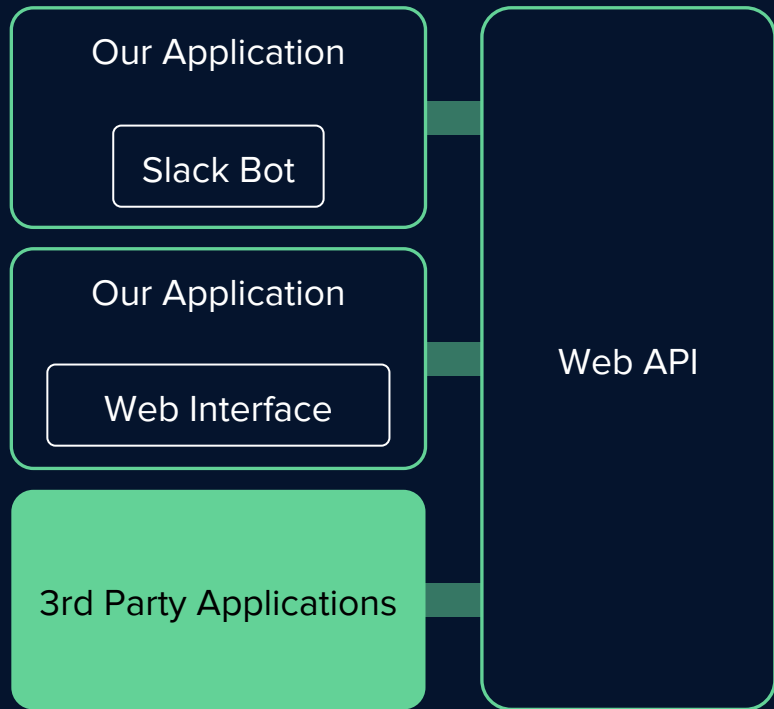
Vision

Product Vision

A simple API that instantly enables question generation from input text.

Impact

Team clarity & focus.



Why API?

Motivation

Reach more people.

Empower use cases.

Concrete deliverable.



Built A Slack TriviaBot

We Wanted To

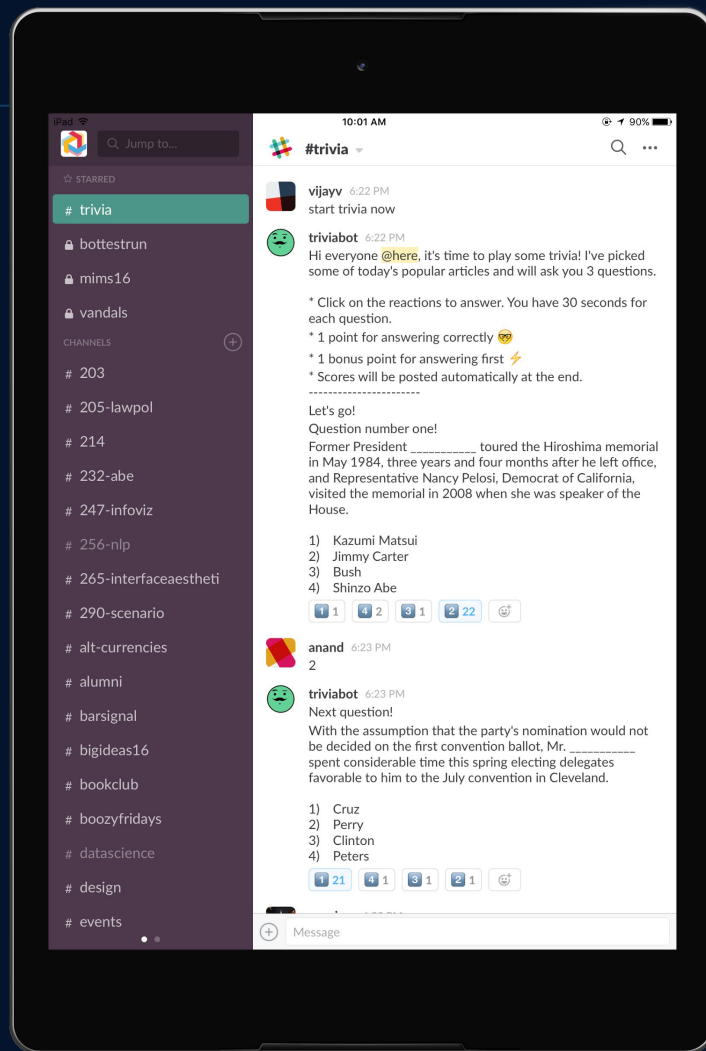
Highlight our work.

Provide a valuable and usable product.

Why Slack? Why Bot?

Access to over 200 users.

Controlled testing.

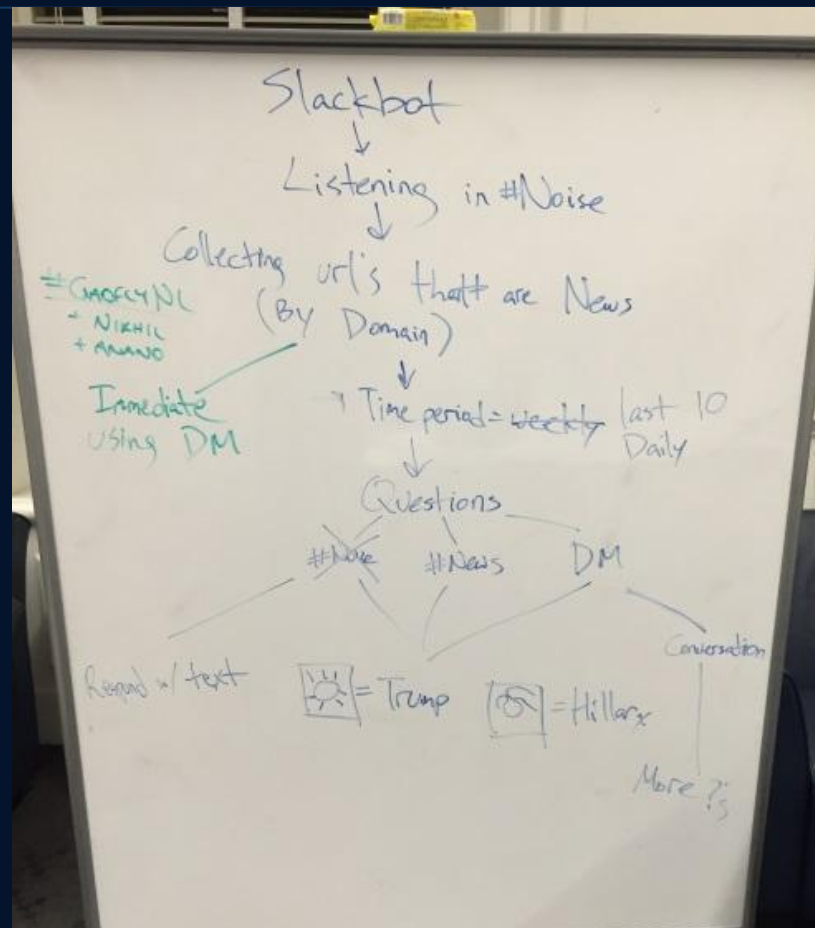


Designing Conversations

Where Do You Begin?

Represent mental models.

Using flowcharts.

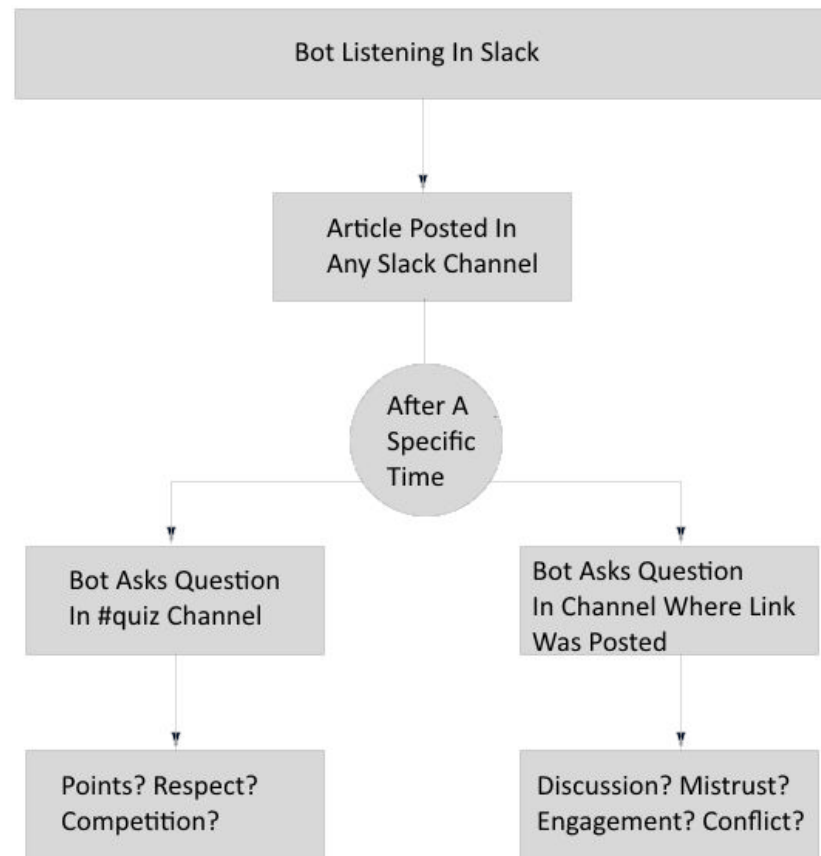


Designing Conversations

Trivia?

Fun and engaging demonstration.

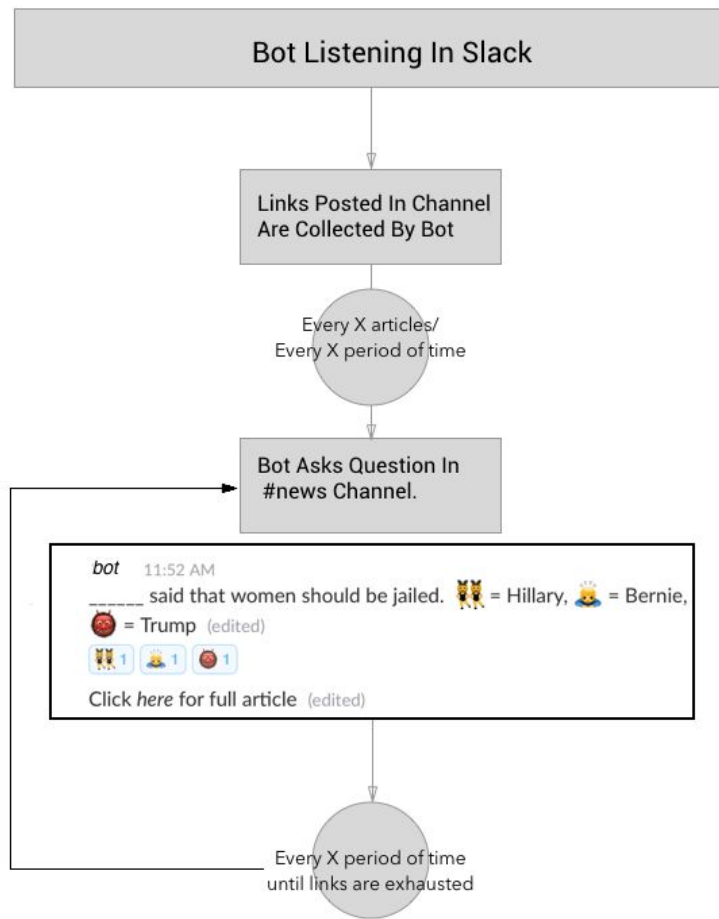
Natural feedback on question quality.



Challenges

Feasibility.

Testing Real-time Data.

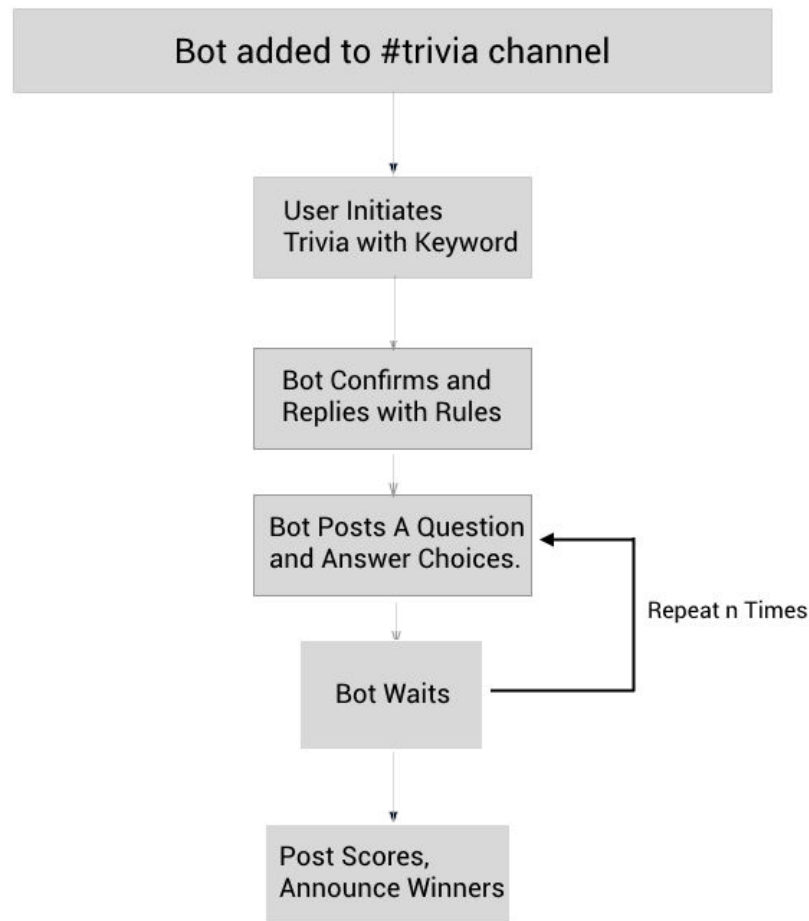


Design Decisions

Impact

Improved user understanding.

Active participation.



Demo

#trivia-demo

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👤 Hi everyone @here, it's time to play some trivia! I've picked some of twitter's popular articles and will ask you 3 questions.

* Click on the reactions to answer. You have 30 seconds for each question.

* 1 point for answering correctly 🏆

* 1 bonus point for answering first 🥇

* Scores will be posted automatically at the end.

Let's get

Question number one!

Former President _____ visited the Hiroshima memorial in May 1986, three years and four months after he left office, and Representative Nancy Pelosi, Democrat of California, visited the memorial in 2006 when she was speaker of the House.

1) Kiyomi Matsui

2) Jimmy Carter

3) Bush

4) Shinzo Abe

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Next question!

With the assumption that the party's nomination would not be decided on the first convention ballot, Mr. _____ spent considerable time this spring electing delegates favorable to him to the July convention in Cleveland.

1) Cruz

2) Perry

3) Clinton

4) Peters

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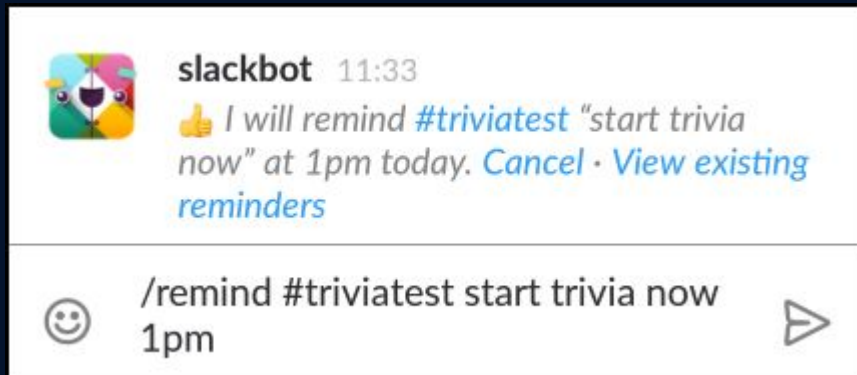
Design Decisions

Motivation

User friction.

Impact

Increased engagement.



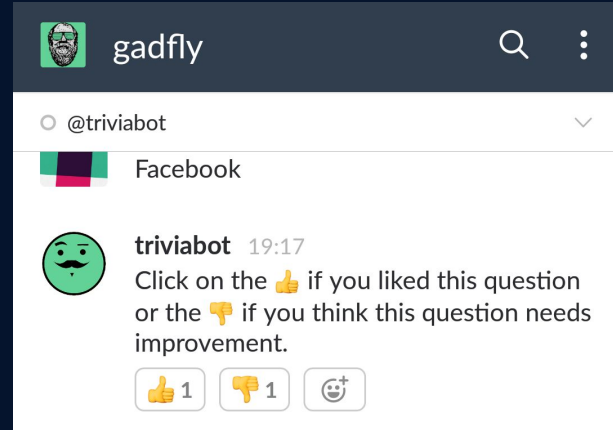
Process

Rapid Iteration

Usability testing.

Outcome

Multiple Choice Questions added.



Website

Motivation

Explain our NLP process.

Accessible to a
general audience.

The wireframe shows a website layout with the following elements:



- Logo:** A square placeholder with an 'X' and the text "Logo".
- Header:** A series of dark rectangular blocks representing navigation or header content.
- Section Header:** The text "about us" followed by several horizontal bars representing content.
- Input Field:** A large rectangular box with the placeholder text "url input field (explanatory placeholder)".
- Button:** A rectangular button labeled "button".
- Text:** The text "show article headline from url here".
- Navigation Tabs:** Four tabs labeled "Questions", "Entities", "Segments", and "Raw Text".
- Generated Question:** The text "generated question here" followed by four rounded buttons labeled "1) option", "2) option", "3) option", and "4) option".

Poster

Motivation

Information about the API.

Final presentation.




The Gadfly Project

A simple service that instantly enables developers to automatically generate questions from input text.


Problem: How might we positively affect the online engagement with and public or social discourse on news?

Solution: Asking questions has inherent value. We want to increase and expand this value to allow interactions that were previously unfeasible. Automatic question generation is costly in time and attention.


So, we built an extensible, automatic question generation service to explore the limitless potential of asking the right questions.




Powerful Natural Language Processing in a Web API.



Automatic, Extensible Question Generation.




Easy to Use, No Hassle of Libraries.




Seamless Integration Across Platforms.

User Inputs Text




→

Identify Key Sentences




→

Transform Into Question




→

Select Good Questions



→

Deliver To Users



The Gadfly API currently powers two Slack bots (QBot and TriviaBot), one web application and supports third party applications.

You can try it out at GadflyProject.com

Summary

Took a systematic, data-informed approach.

Solved problems through design and communication.

Defined product vision.

Designed and developed a Conversational UI.