A photograph of the United States Capitol building in Washington, D.C., taken at dusk. The building's white neoclassical architecture is illuminated from within, with warm yellow light glowing from the windows and the large central dome. The dome is topped with a golden statue. In the foreground, a dark equestrian statue of George Washington stands on a pedestal. The sky is a soft mix of purple, blue, and orange. Lush green trees are visible on the right side of the frame.

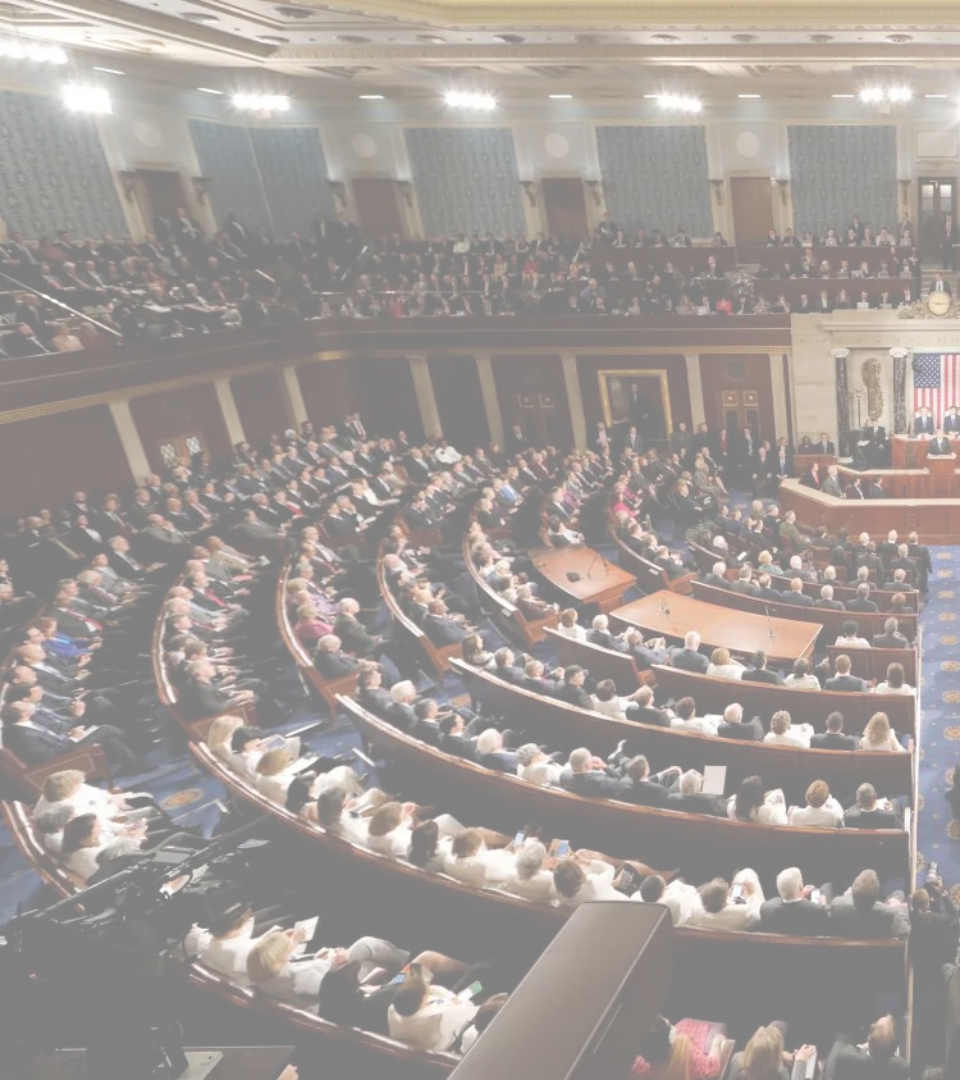
LegalEASE: Streamlining Legal Complexity Through Summarization

Jordan Fan | John Gibbons | Elias Tavaréz

The Problem

Language in which government legislation is written often makes it inaccessible to a large portion of the American population. Bills are often laden with legal terminology and syntax, making these documents difficult to decipher and understand.

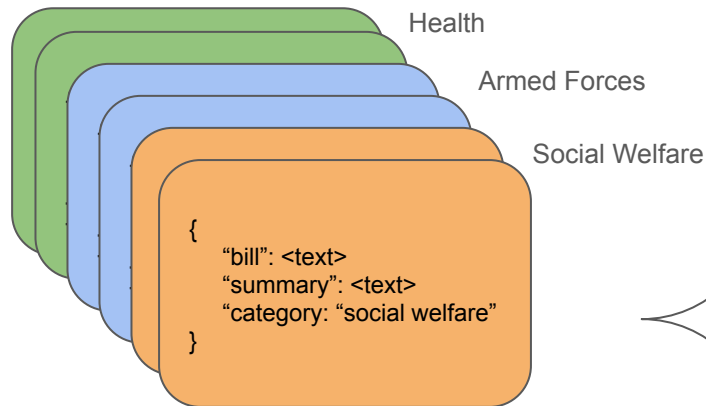




Our Solution

Create an abstractive summarization model that simplifies US government legislation to improve accessibility by increasing legislative transparency and fluency

We looked at congressional bills from 2021-22



Hugging Face

[hheiden/us-congress-117-bills](https://hheiden.us-congress-117-bills)

15,186 Bills

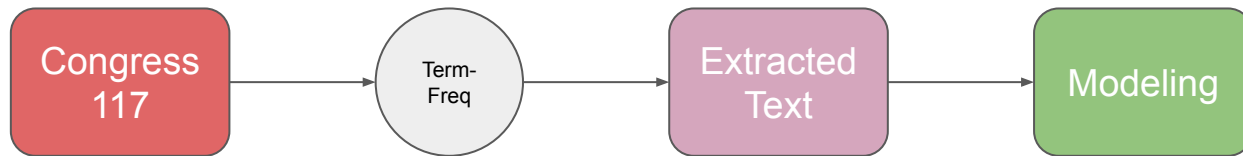
$\frac{2}{3}$ Bills > 500 words

To prohibit assistance provided under the program of block grants to States for temporary assistance for needy families from being accessed through the use of an electronic benefit transfer card at any store that offers marijuana for sale. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, SECTION 1. SHORT TITLE. This Act may be cited as the ``Welfare for Needs not Weed Act''. SEC. 2. WELFARE FOR NEEDS NOT WEED. Section 408(a)(12)(A) (42 U.S.C. 608(a)(12)(A)) is amended-- (1) by striking ``or'' at the end of clause (ii); (2) by striking the period at the end of clause (iii) and inserting ``; or''; and (3) by adding at the end the following: ``(iv) any establishment that offers marihuana (as defined in section 102(16) of the Controlled Substances Act) for sale.''. SEC. 3. EFFECTIVE DATE. The amendments made by this Act shall take effect on October 1, 2022. <all>

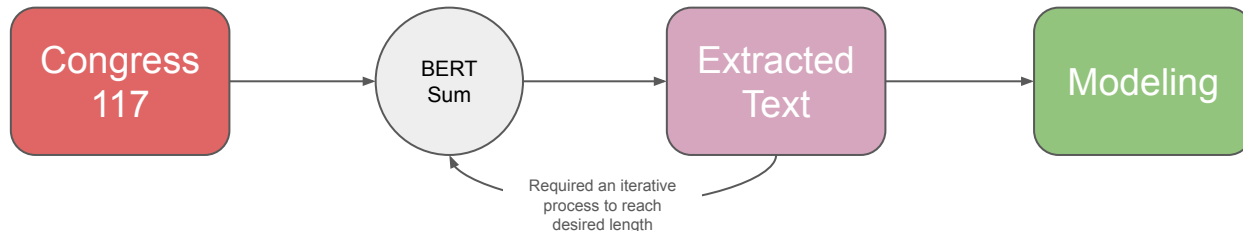
Welfare for Needs not Weed Act This bill prohibits the use of Temporary Assistance for Needy Families (TANF) funds on electronic benefit transfer transactions in any establishment that offers marijuana for sale.

Experiments

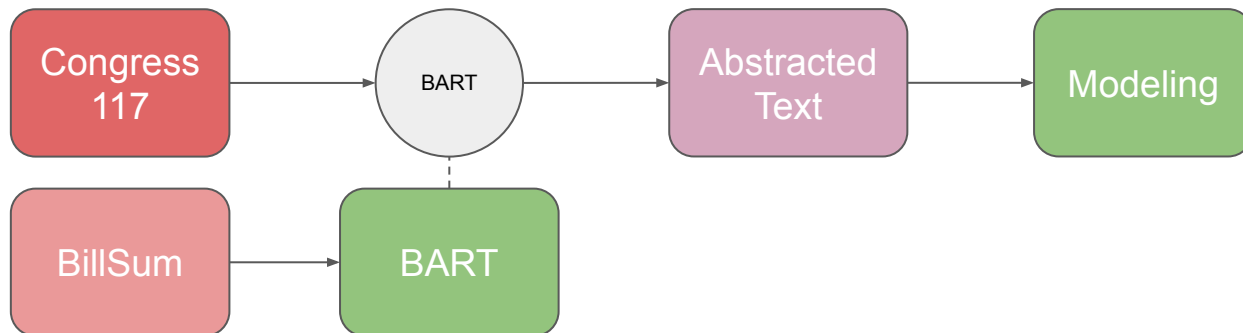
Term Frequency
Extractive
Summarization



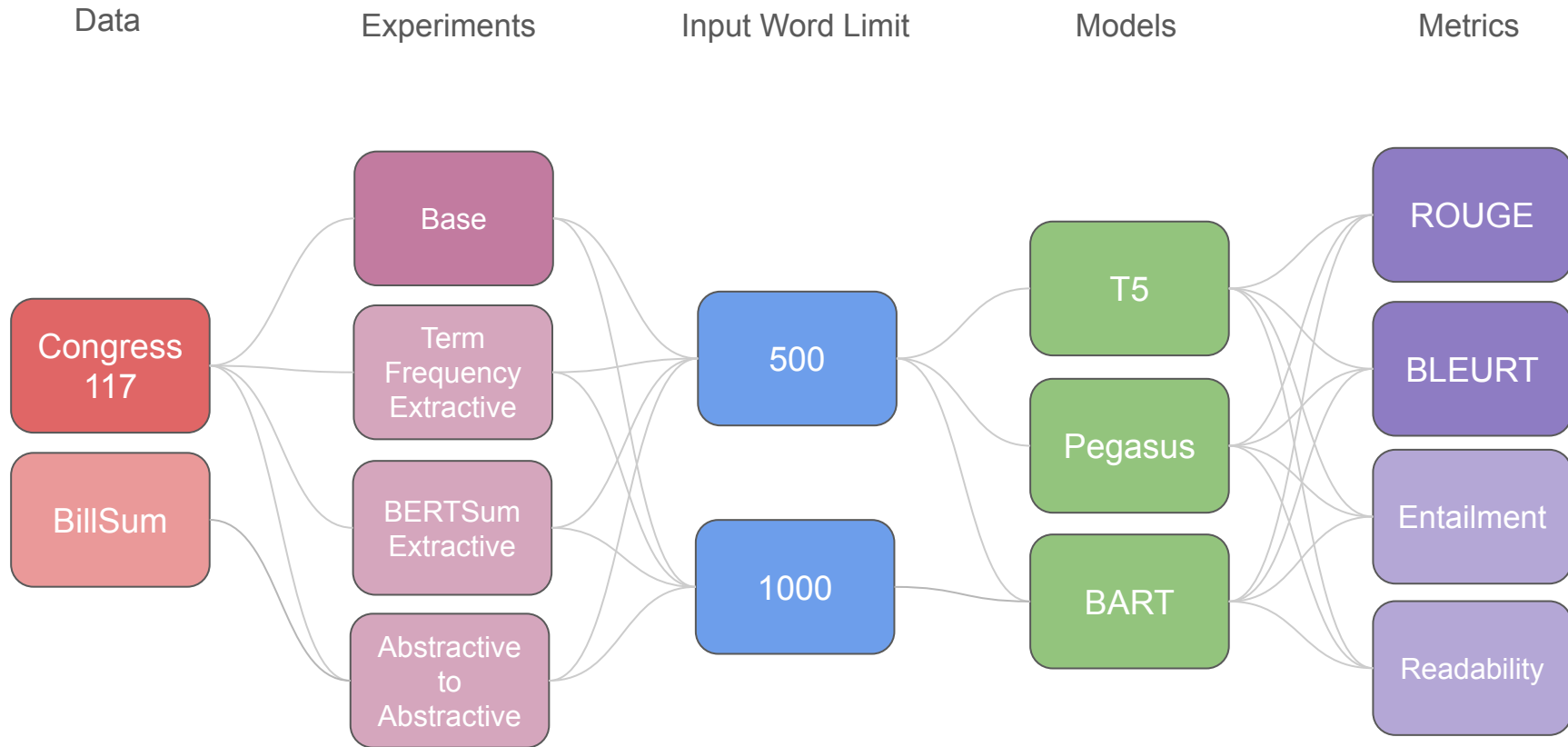
BERTSum
Extractive
Summarization



Abstractive to
Abstractive
Summarization

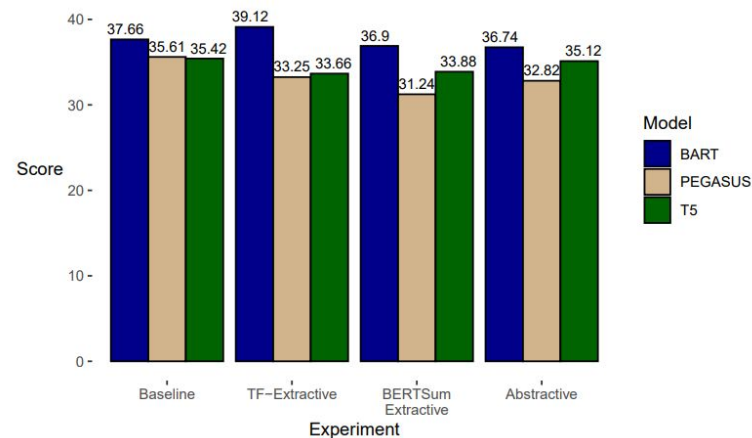


Training and Evaluation Framework

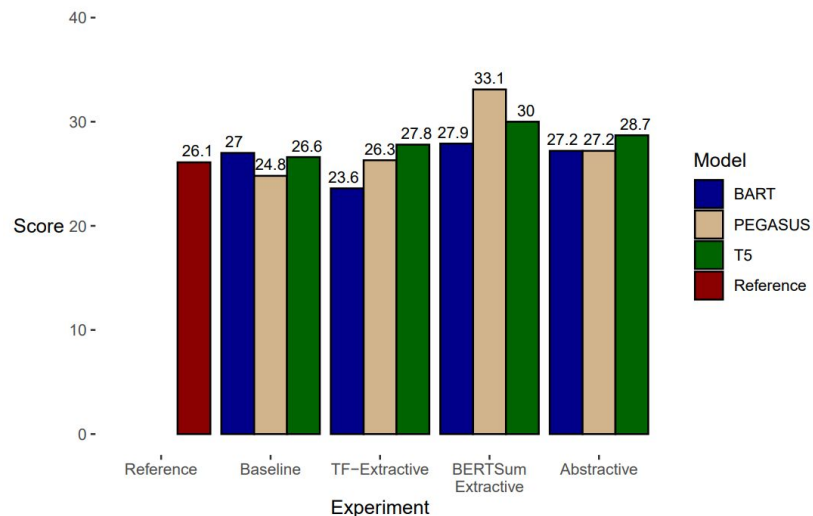


Results

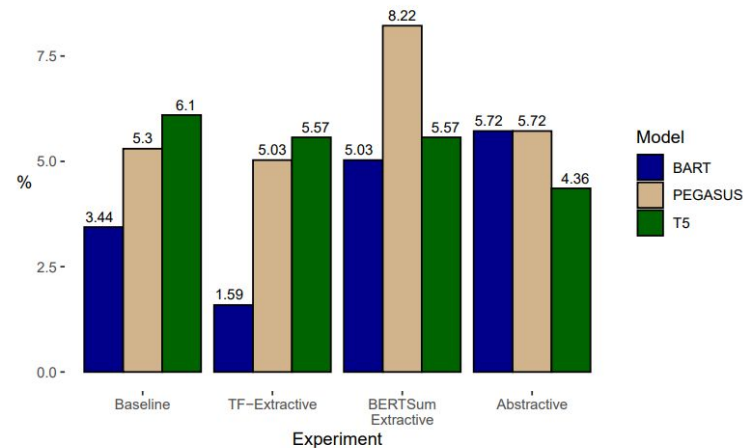
Mean ROUGE-L Scores Across Experiments and Models



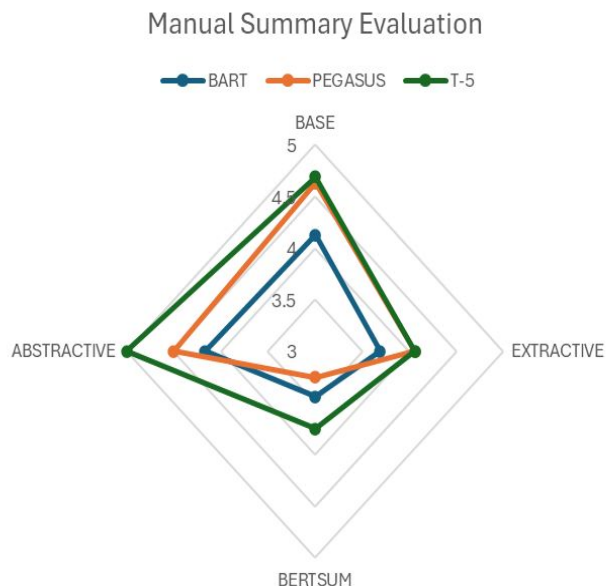
Mean Flesch Reading Ease Across Experiments and Models



Mean Contradiction Percent Across Experiments and Models



Beyond the training metrics



BART

This bill reauthorizes through FY2027 the First Responder Network Authority, which provides funding for state and local governments to establish and operate a first responder network.

T5/Pegasus

This bill reauthorizes the First Responder Network Authority.

This bill repeals provisions terminating the First Responder Network Authority (FirstNet) and the Government Accountability Office reporting requirement for such termination. The FirstNet mission is to deploy, operate, maintain, and improve the first high-speed, nationwide wireless broadband network for first responders.

What did we learn and what's next?

1

Experiments did not marginally improve summaries

1

Explore model architectures with longer context

2

Readability of our summaries was quite low

2

Compose summaries with higher readability scores

3

Evaluating text generation is a difficult task that needs more creative solutions

3

New evaluation frameworks using prompted LLMs may be an effective way to evaluate text generation

A photograph of the United States Capitol building in Washington, D.C., taken at dusk. The building's white neoclassical architecture is illuminated by warm interior lights, and its iconic blue and gold dome is topped with the Statue of Freedom. In the foreground, the equestrian statue of George Washington stands on a pedestal. The sky is a soft gradient of orange and blue, and trees are visible on the sides.

Thank you for your attention!

Any questions?