**Analysis of TF-IDF over BoW Model:**

TF-IDF, or Term Frequency-Inverse Document Frequency, is a smart way of figuring out which words are important in a document. It looks at how often a word shows up in that document but also considers how rare it is across all the documents.

1. Word Occurrence and Rarity:

- TF-IDF looks at how much a word shows up in a document and checks if it's not too common in all the documents.

2. Attention to Common Words:

- Words like "is," "am," and "to" are kind of ignored because they're usually everywhere and don't tell us much.

3. Giving More Importance to Unique Words:

- If a document has special words that aren't used a lot in other documents, TF-IDF thinks those words are pretty important.

TF-IDF helps us understand what makes a document unique and important by looking at its words in a clever way. It's handy when we want to find specific information in a bunch of documents, like in search engines or sorting through data.