



# SummAI – AI that summarizes business texts

**It uses two smart AI methods to find key points and make short, clear summaries.**

**Presented by: Team Vertex**

From SEC-U

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# Meet the Team Behind SummAI

Our team is excited to use AI to help businesses tackle real-world problems.



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## The Problem: Too Much Info

Business analysts get swamped with documents, reports, and long emails every single day. Reading all of it by hand takes a lot of time and is really tiring.

So, how can we quickly turn huge business documents into short, useful summaries?

# What SummAI Wants to Achieve

Our goal is to create an easy-to-use tool that quickly summarizes information, helping people deal with too much text.

## Automatic Summaries

We'll build a smart tool that can summarize all sorts of work documents.

## Smart Summary Styles

It will use two main ways to summarize: picking key sentences (extractive) and rewriting the text in new, shorter words (abstractive) for the best results.

## You Control the Length

You can choose how long you want your summary to be – short, medium, or long – whatever works for you.

## Simple to Use

We'll offer a straightforward website where you can easily paste your text or upload a file.

## Work Faster, Decide Quicker

This tool will cut down on your reading time and help you make decisions much faster.

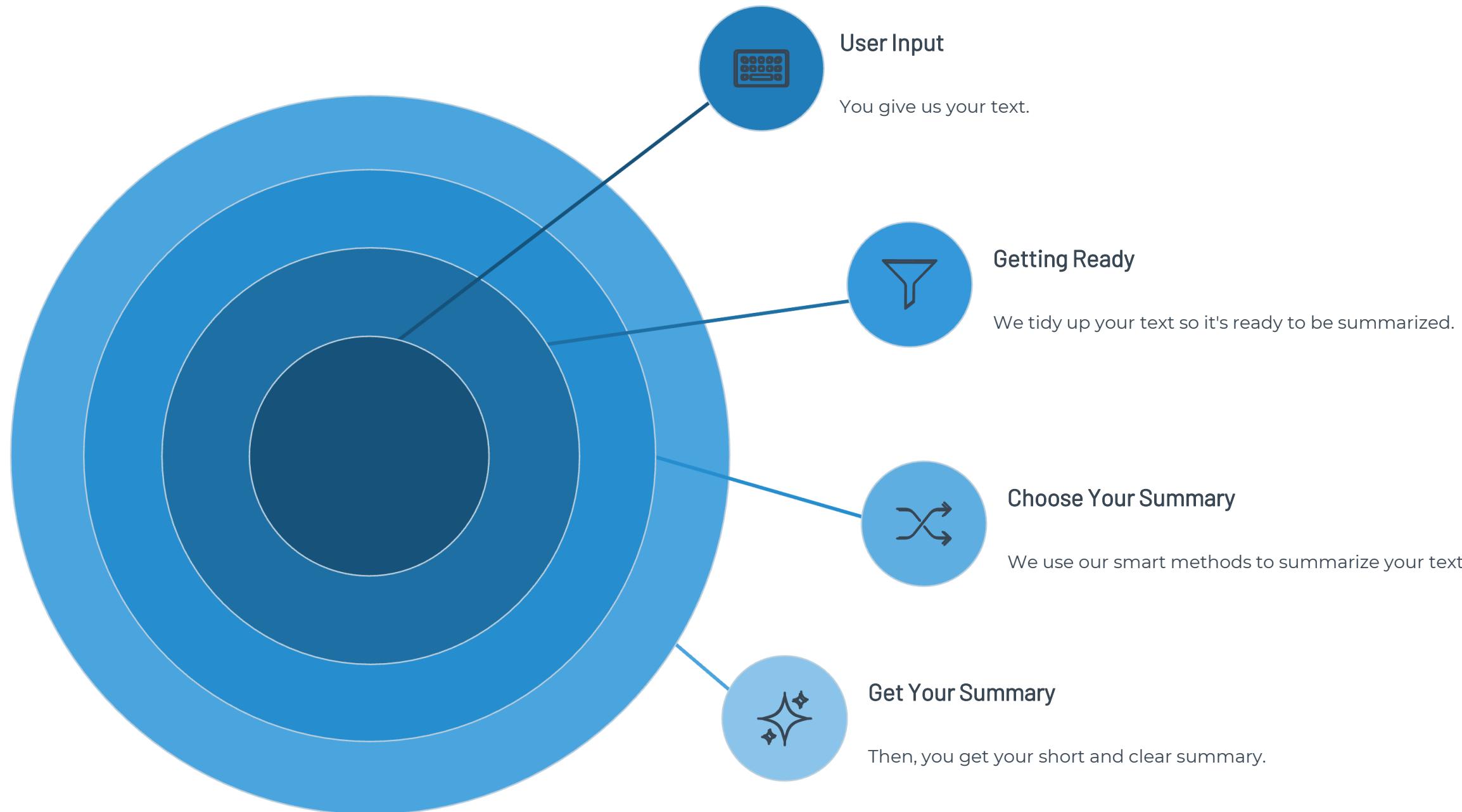
# Meet SummAI: Your Smart Summary Helper

SummAI uses clever computer tricks to give you summaries that are useful and easy to read.

- **Finds key parts:** It picks out the most important sentences from your text.
- **Writes new parts:** It also creates fresh, easy-to-understand sentences for a smoother summary.
- **Simple to use:** Our web app makes it super easy to get your summaries.
- **Works with your files:** You can type or paste text, or upload PDF/TXT files. Get your summaries back as TXT or PDF too!



# How SummAI Works



# Using the CNN/DailyMail Dataset



We use the famous CNN/DailyMail dataset from Kaggle to teach SummAI and see how well it works.

- **Lots of Articles:** This dataset has a huge number of news stories.
- **Expert Summaries:** Every article comes with summaries written by professionals. This helps us check our model's quality.
- **Strong Testing:** It's key for checking how well our summary models (both direct and creative) perform.
- **Real-World Use:** This helps make sure SummAI can handle many different kinds of text.

# Our Smart Combo: Extractive and Abstractive Summaries

## Extractive Method: TextRank

This method picks out the most important sentences directly from the original text. It finds them by checking how similar different parts of the text are.

- Breaking text into sentences
- Converting words into data
- Finding how alike sentences are
- TextRank (a smart way to rank sentences)
- Picking the best sentences



## Abstractive Method: T5 Transformer

This method writes brand new sentences and rewords information. It creates summaries that sound more natural and human-like.

- Using the T5-small model (a trained language tool)
- Summarizing based on clear instructions
- Smart way to choose the next words (Beam Search)
- Creating fresh, new text

# The Technology Behind SummAI

SummAI uses smart, up-to-date tools. This helps it work smoothly, quickly, and dependably.



## Python

Our main coding language for everything from the system's core to understanding text.



## Flask

A simple tool to build the user interface you see.



## HuggingFace

Provides powerful language models, like T5, for smart text processing.



## NLTK

A helpful toolkit for processing and understanding text.



## scikit-learn

Gives us the smart algorithms for our TextRank summary method.



## PyPDF2

A tool to read and create PDF documents.



## Pandas

Used for handling and understanding all our data.

# Easier Ways to Get Information

SummAI isn't just for summaries. It helps you get more done and understand things better in a world full of information.

SummAI uses smart AI tools and a design that's easy to use. This helps busy people make quick, good choices.





## Conclusion

SummAI doesn't just summarize; it transforms how students and professionals engage with information, empowering them to grasp complex documents instantly and make informed decisions with unprecedented speed and clarity.

## → Future Scope

- Multilingual summarization
- Chrome extension
- Mobile app version
- Business-domain fine-tuning
- Real-time API