



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.

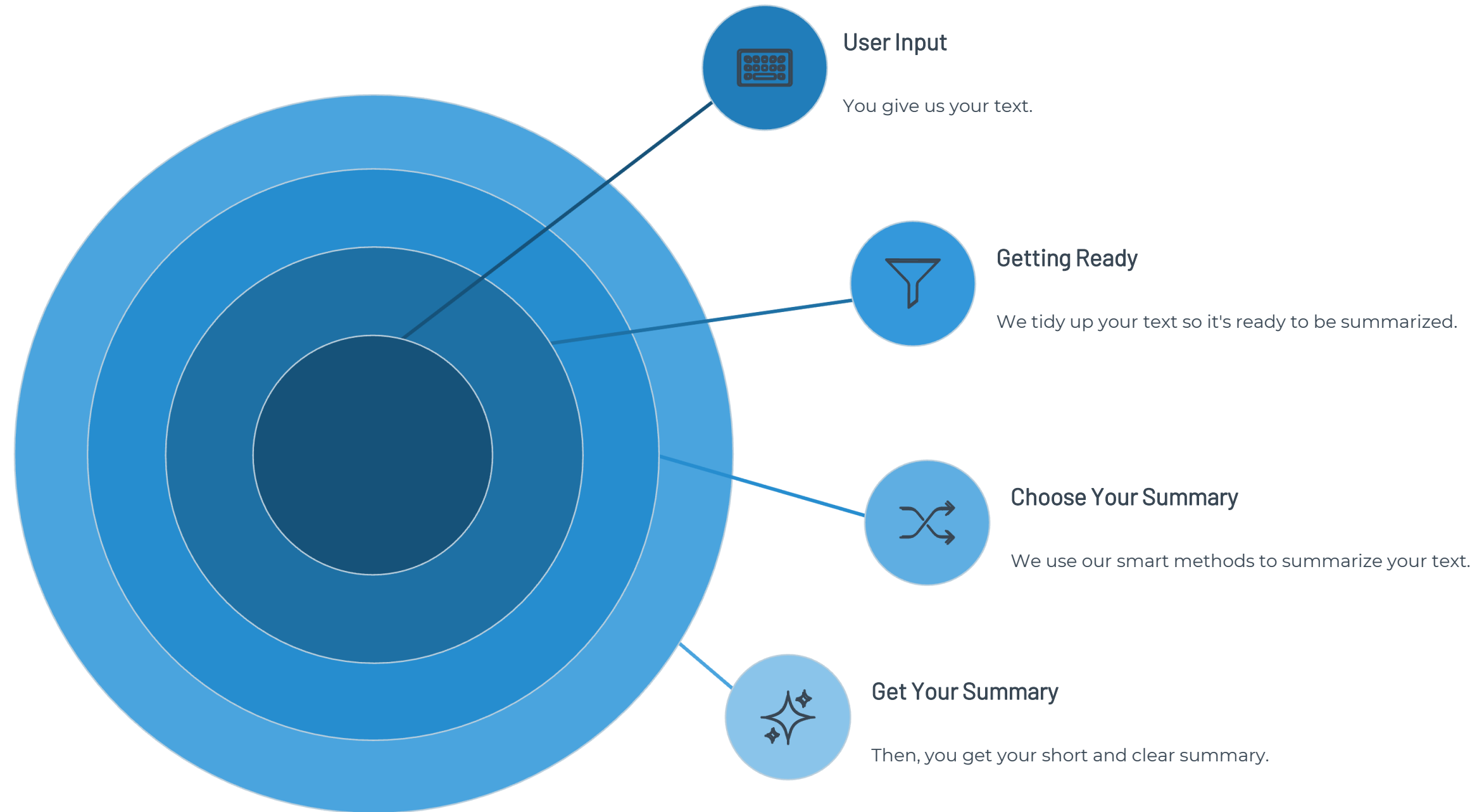
Meet SummAI: Your Smart Summary Helper

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.

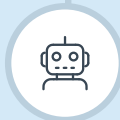
- **Lots of Articles:** This dataset has a huge number of news stories.
- **Expert Summaries:** Every article comes with summaries written by professionals. This helps us check our model's quality.
- **Strong Testing:** It's key for checking how well our summary models (both direct and creative) perform.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