

Sanskrit voice to text and interface in Google Search Engine

Indian Knowledge System (IKS), All India
Council for Technical Education (AICTE)



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tips, tools, resources and more...

Sanskrit text to speech

Researchers at IIT Kharagpur are making Sanskrit accessible with their Artificial Intelligence-based system for processing Sanskrit texts

Computational Linguistics R&D
Special Centre for Sanskrit Studies
Jawaharlal Nehru University
New Delhi

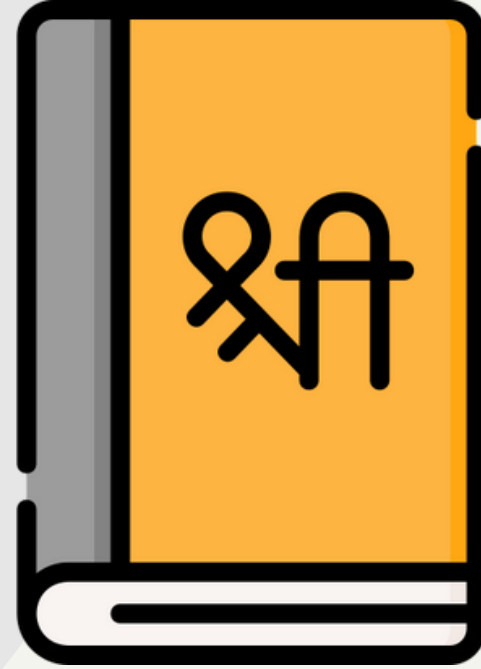
Home Language Processing Tools Lexical Resources e-Learning Corporate-Text Research Students

Feedback

Sanskrit Text to Speech (TTS) System
संस्कृत संवाचक

The "Samvachaka - A Speech Synthesis System for Sanskrit Prose" is a result of the research carried out by P. Mishra (Ph.D. 2009-2013) under the supervision of Dr. Girish Nath Jha and Dr. Kalika Bali for the award degree. The coding for the application was done by Divakar Mishra. The application takes simple Sanskrit text as input and returns synthesized speech. It does not take into consideration prosodic features and can also be used for reasonable success.

कृपया नीचे संस्कृत शब्द वाच्य लिखें (Please enter Sanskrit word/sentence)



Sanskrit text to speech

There are many libraries, extensions & APIs that convert sanskrit text into Speech

Compiled Repositories

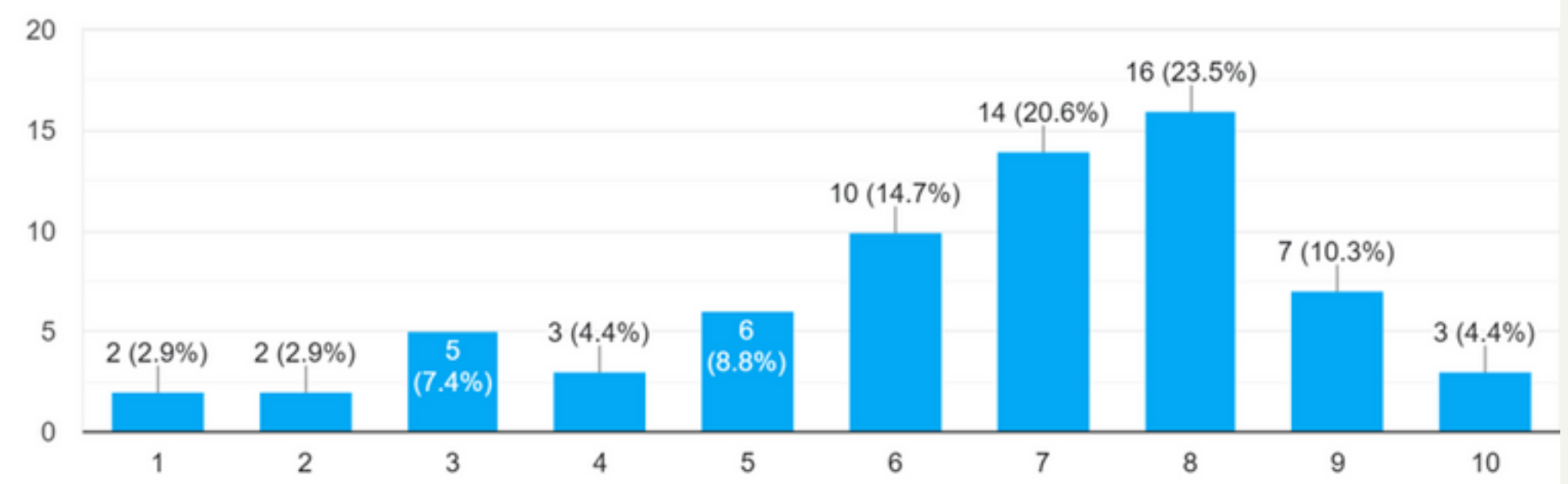
There are some compiled repositories used by researchers worldwide; i.e GRETIL , VedicSanskrit, etc.

Research & Survey

There has been increasing demand for sanskrit resources countrywide since the NEP 2020 has been announced. Results of Survey on Sanskrit Literature Accessibility: <https://bit.ly/sihsurvey>



(On a scale of 1 to10), how difficult do you find to search Sanskrit literatures online?
68 responses



**A google extension which converts
Sanskrit speech to text and
transcribes it on the search bar**

Feature Add Ons

- 1) Synonyms of words**
- 2) Find the word instances in a page**

संज्ञान

Sanskrit Voice-to-Text

Record

Stop

Format: 1 channel pcm @ 48kHz

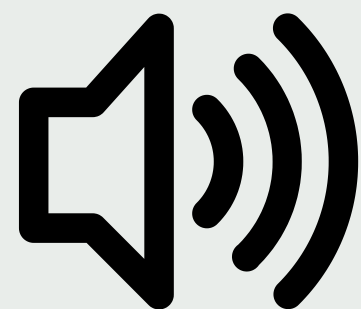
Output:

अग्नि

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Related Words: धनञ्जय, कृपीटयोनि, ज्वलन, जातवेदस्, तनूनपात्, बर्हि, शुष्मन्, कृष्णवर्त्मन्, शोचिष्केश, उषर्बुध, आश्रयाश, बृहद्भानु, कृशानु, पावक, अनल, रोहिताश्व, वायुसख, शिखावत्, आशुशुक्षणि, हिरण्यरेतस्, हुतभुज, दहन, हव्यवाहन, सप्तार्चिस्, दमुनस्, शुक्र, चित्रभानु, विभावसु, शुचि, अप्पित्त, धूमकेतु, त्रेता, तमोनुद्, शिखिन्, विरोचन, धिष्य, बहुल, वसु, तमोपह,

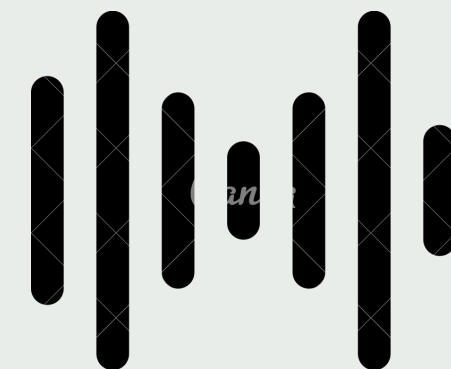
Dataset Preprocessing



Reading Audio file



Decoding Audio file

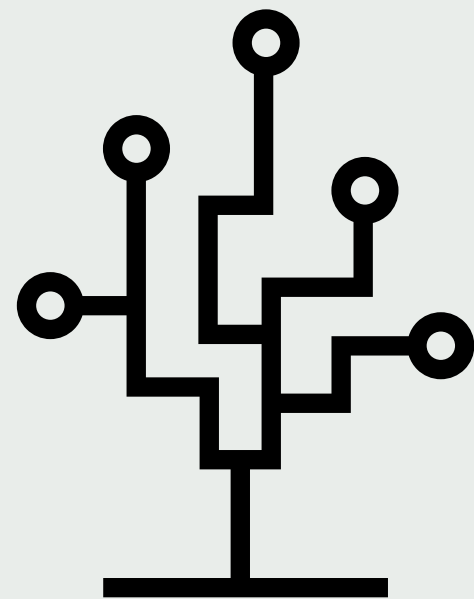


Spectrogram Data



Obtain magnitude from Data

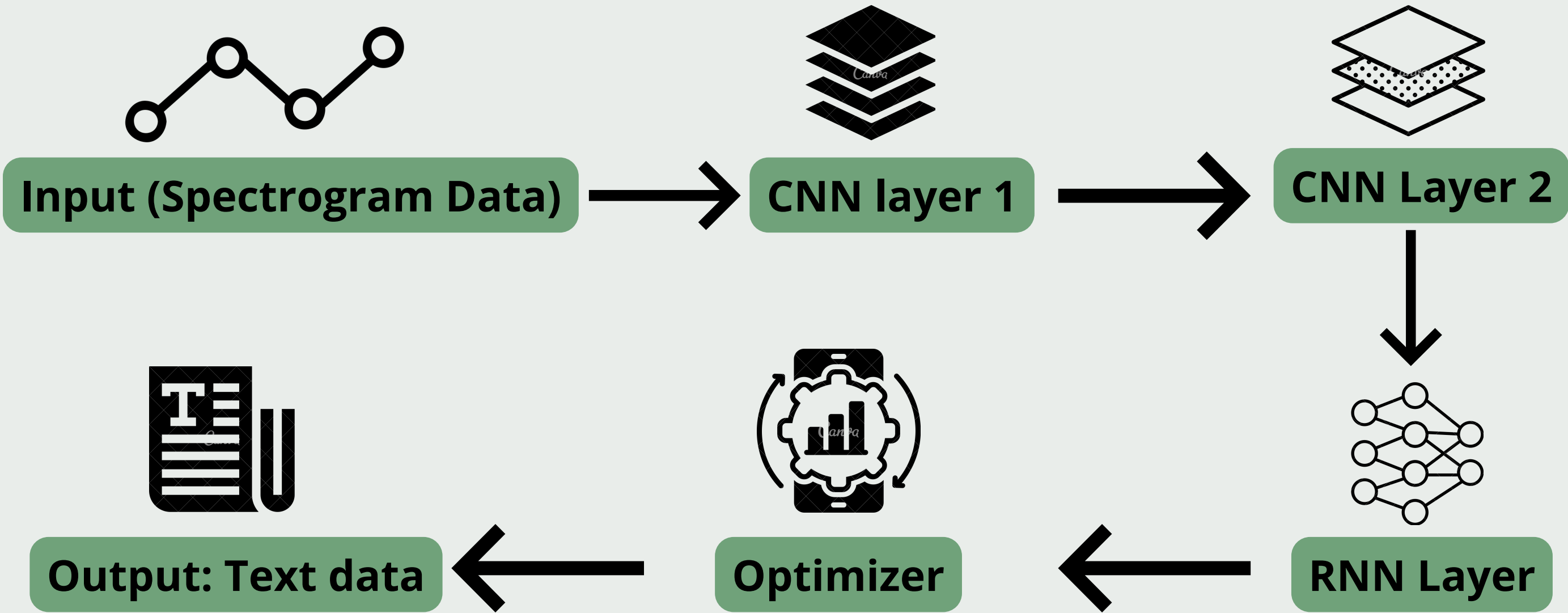
Normalizing Data



Data Ready to Train the model

Model

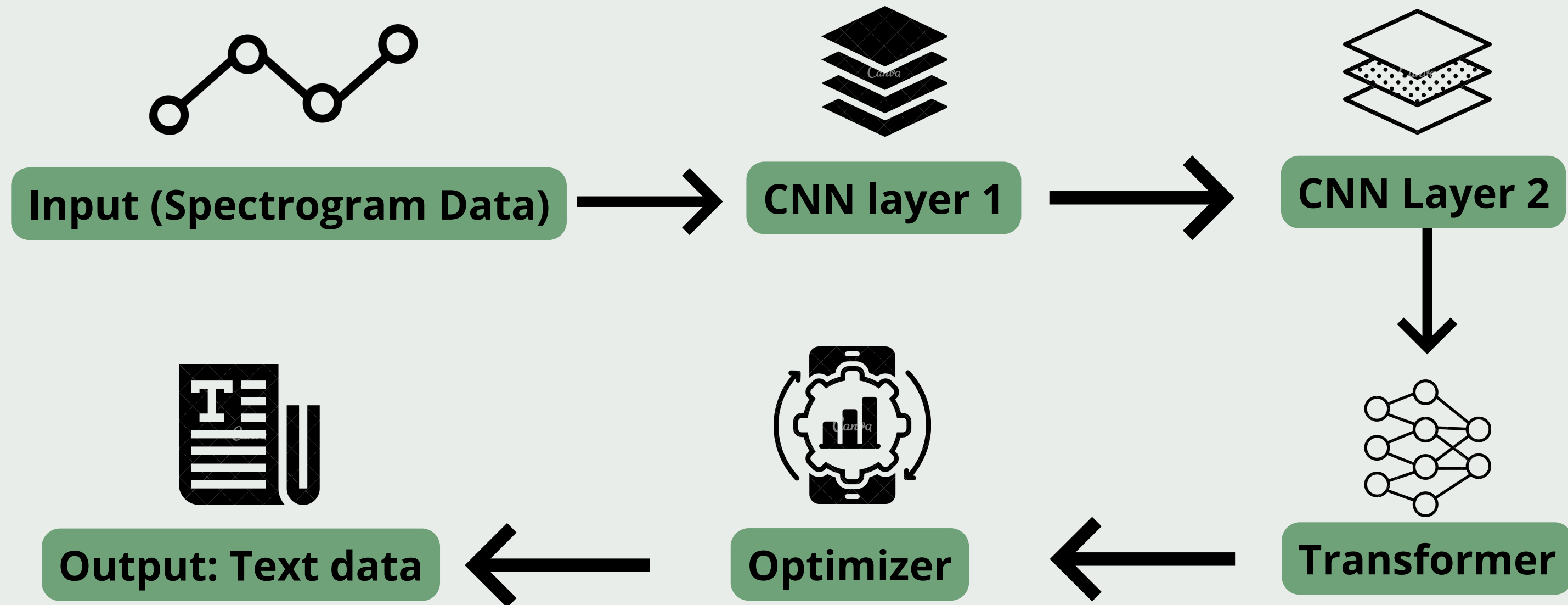
Based on DeepSpeech 2



Word Error Rate: 32.3

Model

Based on Wav2Vec model



Word Error Rate: 17.9

Sangyan Applications

- Increase Global accessibility of Sanskrit Literature for Research & Self-Learning
- Help Scientists to gain knowledge on ancient technology and arts that will be digitized with the help of Sangyan.



Future Aspects

- Collaborate with Google and other search engines (like Baidu) to integrate Sangyan so that it can be accessible through any Electronic device
- Develop a mobile app that uses proposed model to make it more user-friendly. Add a feature to learn pronouncing Sanskrit



Thank You

आइए संस्कृत को वैश्विक बनाएं

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