

Speech Recognition Application: Spoken Dialog System and VoiceXML

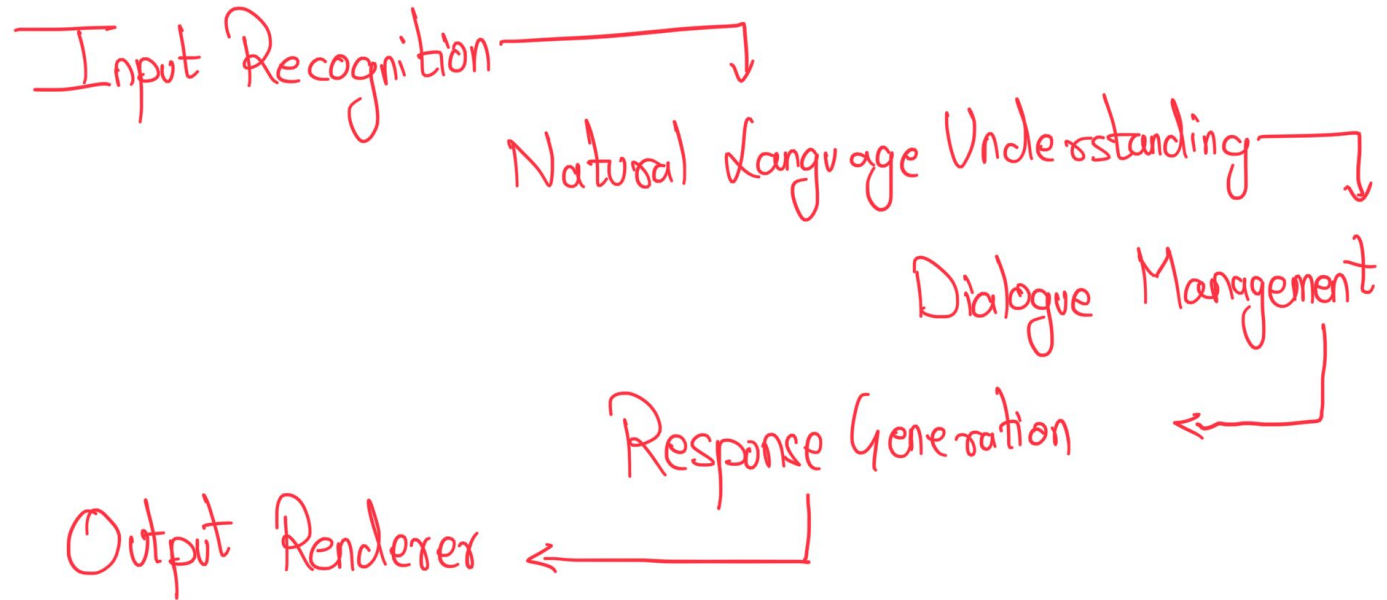
M.Tech. Artificial Intelligence, Second Year, NMIMS

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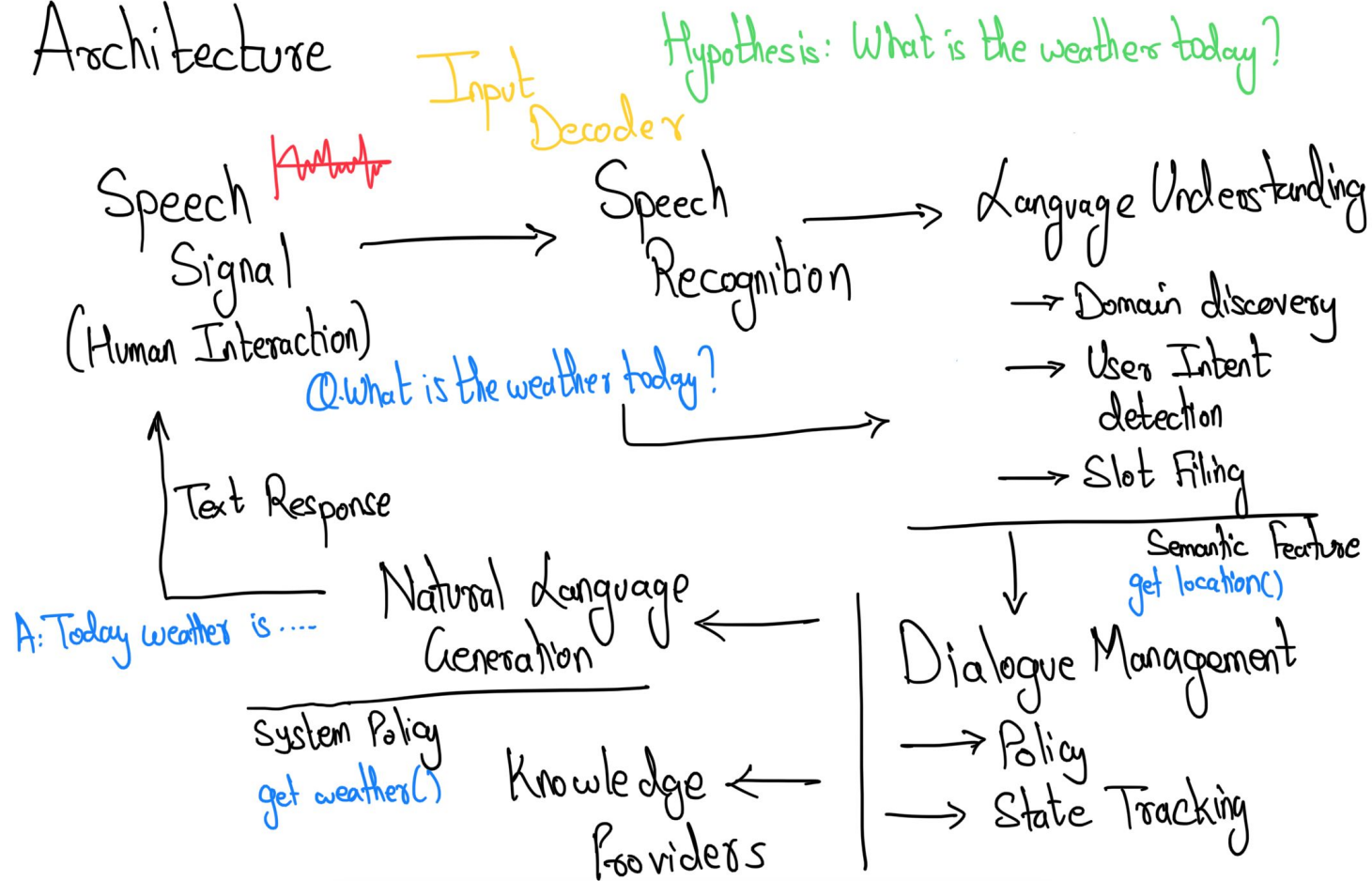
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Spoken Dialog System

→ A dialogue system is a program that communicates with the user in a natural way.



Architecture



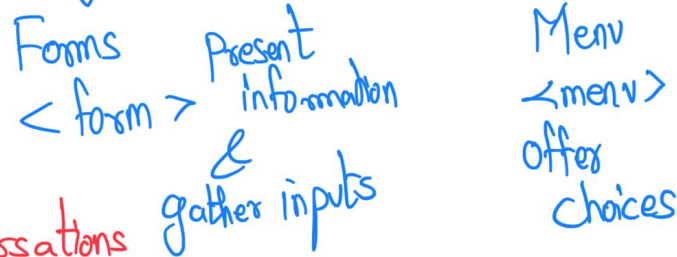
Voice XML

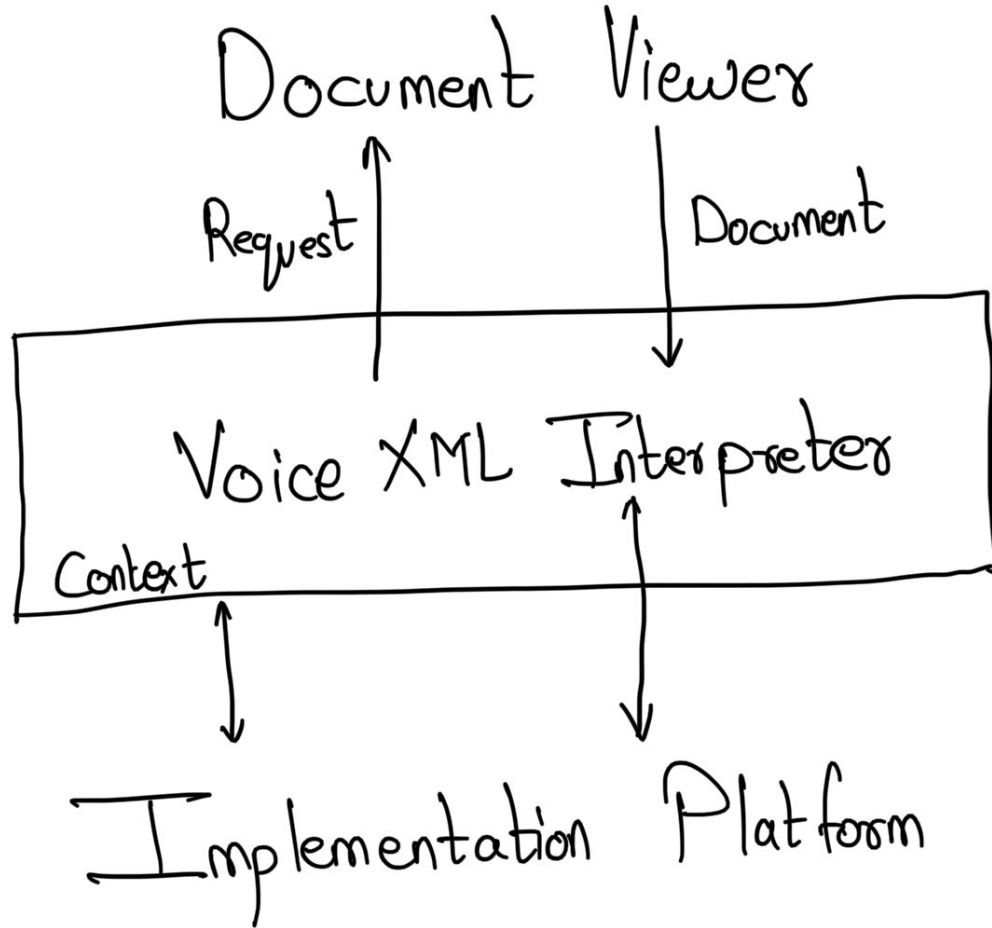
- Designed for creating audio dialogs.
- The objective is to utilize the advantages of web-based development and content delivery to interactive voice response applications

→ Features

- Synthesized speech
- Digitized audio
- Telephony
- Mixed initiative conversations

Types of dialogs





Speech Synthesis Markup Language (SSML)

- It is embedded in VoiceXML for speech synthesis
- It lets developers specify how input text is converted into synthesized speech by using TTS
- SSML can control various vocal characteristics of TTS output, such as pronunciation, speech rate, and other elements to produce more natural-sounding voice experience.
- Various cloud supports SSML, Google, AWS and Azure.

References

- <https://course.ccs.neu.edu/csg170/VoxeoInstructions.pdf>
- https://gupea.ub.gu.se/bitstream/handle/2077/34203/gupea_2077_34203_1.pdf
- <https://pypi.org/project/PyVXML/>
- <https://www.youtube.com/watch?v=90UjUJh8R4k>