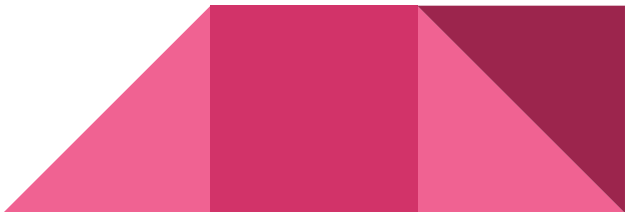*Python based - Voice Assistant*
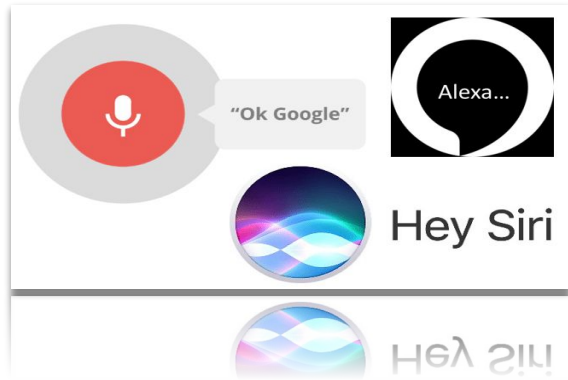
Reetesh Nigam
Vice President
Morgan Stanley

Purpose of Talk

- Introduce a Python-based voice-assistant

- Demonstration of various tasks using voice-assistant
  - DevOps
  - Chatbot
  - Software Architecture Diagram as Code
  - Security
  - Future implementation

What is a Voice-Assistant and Example

❏   Definition of a voice assistant

❏   Example of popular voice assistant

Why a Python-Based voice assistant

Python Libraries for voice recognition and Synthesis

- ❏ SpeechRecognition
- ❏ PocketSphinx
- ❏ pyttsx3
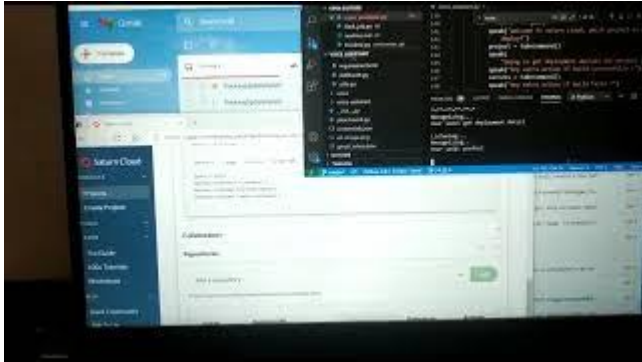- ❏ gTTS (Google Text-to-Speech)

Voice Assistant for Software Architecture Diagram as Code

❏ What is Architecture as Code
❏ How a voice assistant can help with Architecture as Code
   ❏ Voice commands
   ❏ Automation
   ❏ Accessibility

Benefits of Using a Voice Assistant for DevOps

- ❏ How a voice assistant can help with DevOps tasks
- ❏ Example
    - ❏ Deployment
    - ❏ Testing
    - ❏ Monitoring
    - ❏ Creating tickets / Generate Reports

Benefits of Using a Voice Assistant for Chatbot Development

❏ What is ChatBot
❏ How voice assistant can help with chatbot development
    ❏ Testing
    ❏ Integration
    ❏ Personalization
    ❏ Natural Language Processing

Voice Assistant for Security

- ❏ Overview of Security
- ❏ How a voice assistant can help with Security task
  - ❏ Locking/Unlocking System
  - ❏ Remote control
  - ❏ Integration with other security systems
  - ❏ Hands free operations

Design and Implementation of voice assistant

- ❏ High level architecture
- ❏ Technology used
  - ❏ Python libraries
  - ❏ APIs
- ❏ Git Repo
  - ❏ [python based voice assistant](#)
- ❏ Linked post
  - ❏ [Voice Assistant-Using Python! | LinkedIn](#)

Challenges and Future Work:

Future Work:

- ❏ Robust Speech Recognition Models
- ❏ Offline support of speech recognition
- ❏ Continuous Learning and Adaptation
- ❏ Integration with Emerging Technologies
- ❏ Language Models and Contextual Understanding

Challenges:

- ❏ Accuracy and Reliability
- ❏ Natural Language Processing (NLP)
- ❏ Privacy and Security

Thank You for Your Attention

2 & A