

# Conversational AI Agents



# Conversation AI Agents

- **Conversation AI agents**
  - AI that simulate a human
  - Perform specific tasks
- **These agents integrate multiple AI models**
  - LLMs
  - Text to speech model
  - Speech to text model
  - Voice cloning model

# **Enhancing Human Jobs**

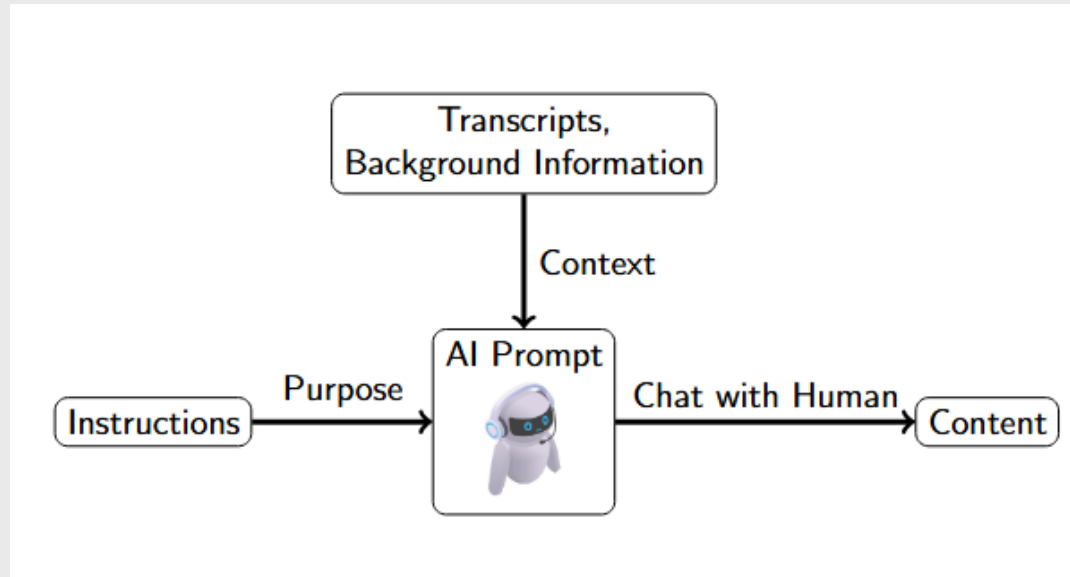
- **Conversational AI agents have the potential to “enhance” several human jobs**
- **Social media**
  - AI influencers, content creation assistants
- **Education**
  - Teaching assistants, research assistants, professors
- **Personal support**
  - Therapists, life coaches, friends
- **Interviewers**
  - Pollsters, human resources

# **Building a Conversational AI Agent**

- **Conversational AI agents have four main components**
  - **Prompt – text data about the agent's background, instructions, speaking style**
  - **Voice – AI cloned voice (ElevenLabs)**
  - **Tools – functions called by the agent to extract or introduce data to the conversation**
  - **Phone number – how you can reach the agent (Twilio)**

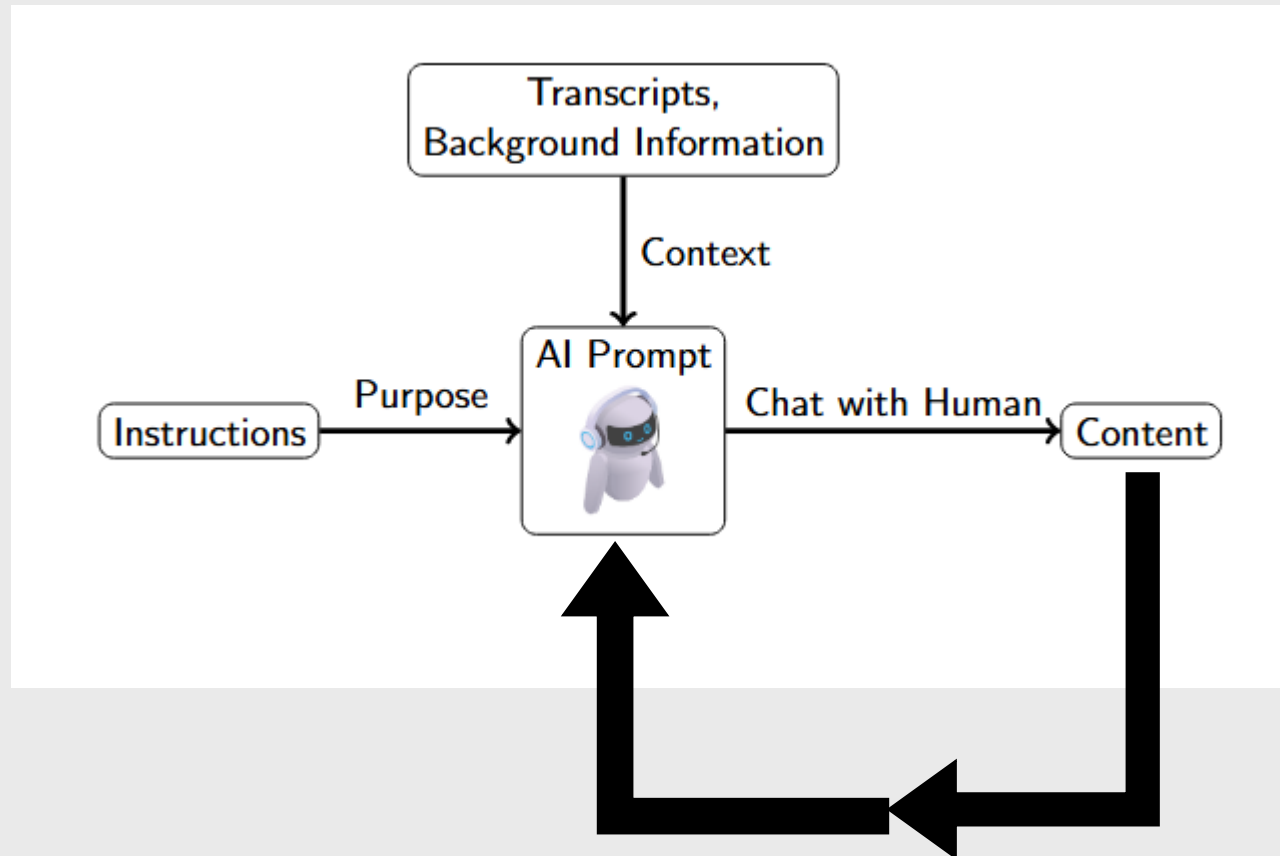
# Prompt Flow Diagram

- Static prompt



# Prompt Flow Diagram

- **Dynamic prompt – feedback new conversations into previous prompt**



# Voice Cloning

- ElevenLabs allows us to clone voices (<https://elevenlabs.io/>)
- We only need a 10 second audio file
- Can obtain audio files from YouTube
  - Choose a YouTube video of the subject speaking alone or mostly alone
  - Download audio of YouTube video (<https://tuberipper.com>)
  - Clip the audio to 10 to 30 second clips (<https://audiotrimmer.com/>)

# Creating Conversational AI Agent

- **Conversational AI Agent can be created on ElevenLabs (<https://elevenlabs.io/>)**
- **Agent needs**
  - Name, prompt, voice, LLM
- **Agent can perform functions defined by tools during the conversation**
  - Collect information from conversation (user name, location, etc).
  - Introduce data into conversation (weather, stock prices, etc)
- **ElevenLabs provides automatic conversation analysis**
  - Summary, data collection, conversation evaluation



# Phone Number

- **Conversational AI agent can be reached by phone (like a human) if you give it a phone number**
- **Phone numbers can be purchased from Twilio (<https://www.twilio.com/>)**
  - **Numbers cost \$1.15 per month**
  - **Usage costs \$0.40 per hour**

# **Coding Session**

- **We will create the basic prompt for an AI conversational agent**
  - Background data from websites
  - Speaking style and quotes from YouTube videos
- **We will create an ElevenLabs AI Conversational agent**
  - Clone a voice
  - Connect a Twilio phone number
  - Update the prompt with conversation history to create memory