



Texas Wesleyan

SCHOOL OF ARTS AND SCIENCES

SENIOR DESIGN PROJECT
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Rasa NLU Chatbot

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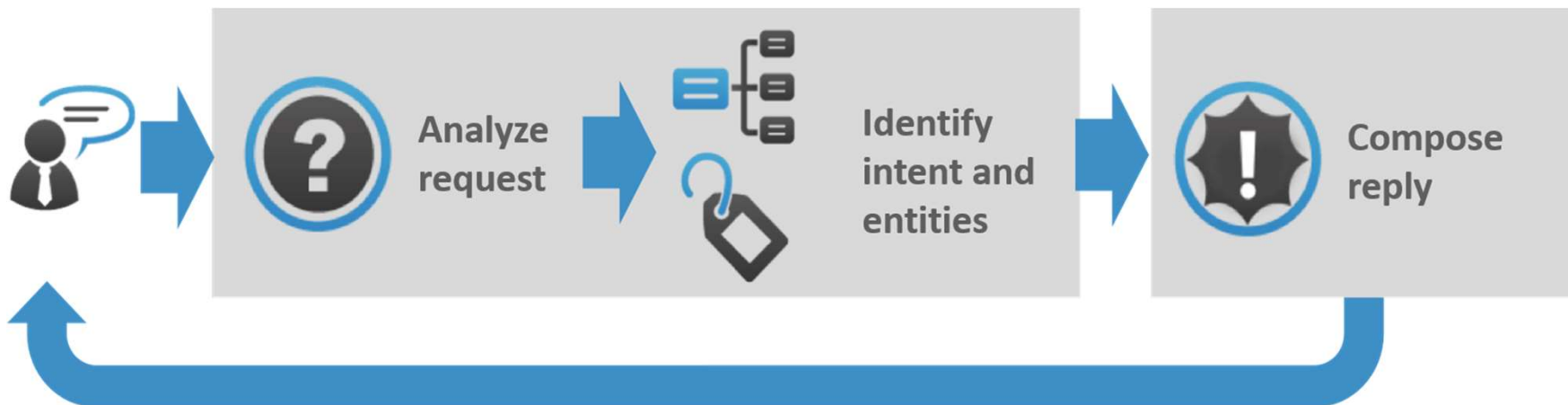
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Computer Science Department
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What exactly is a chatbot?

- A chatbot is an artificial intelligence (AI) software
- can simulate a conversation (or a chat) with a user in natural language
- Chat through messaging applications, websites, mobile apps or through the telephone.



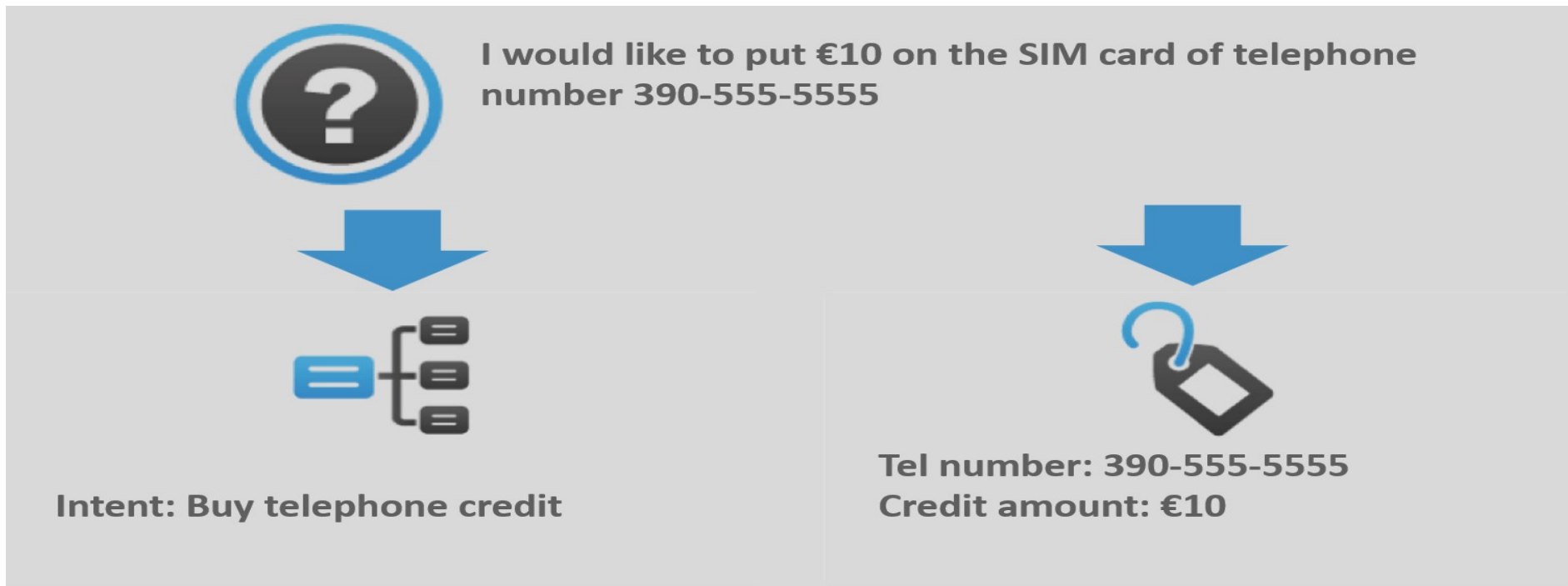
How a chatbot works



Two different tasks at the core of a chatbot:

- 1) User request analysis
- 2) Returning the response

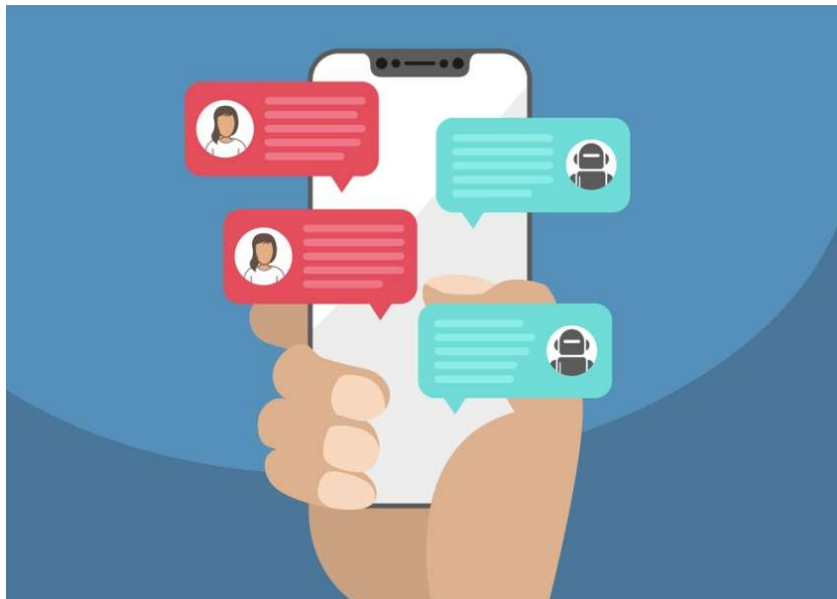
User request analysis:



- analyzes the user's request to **identify the user intent** and to **extract relevant entities**.

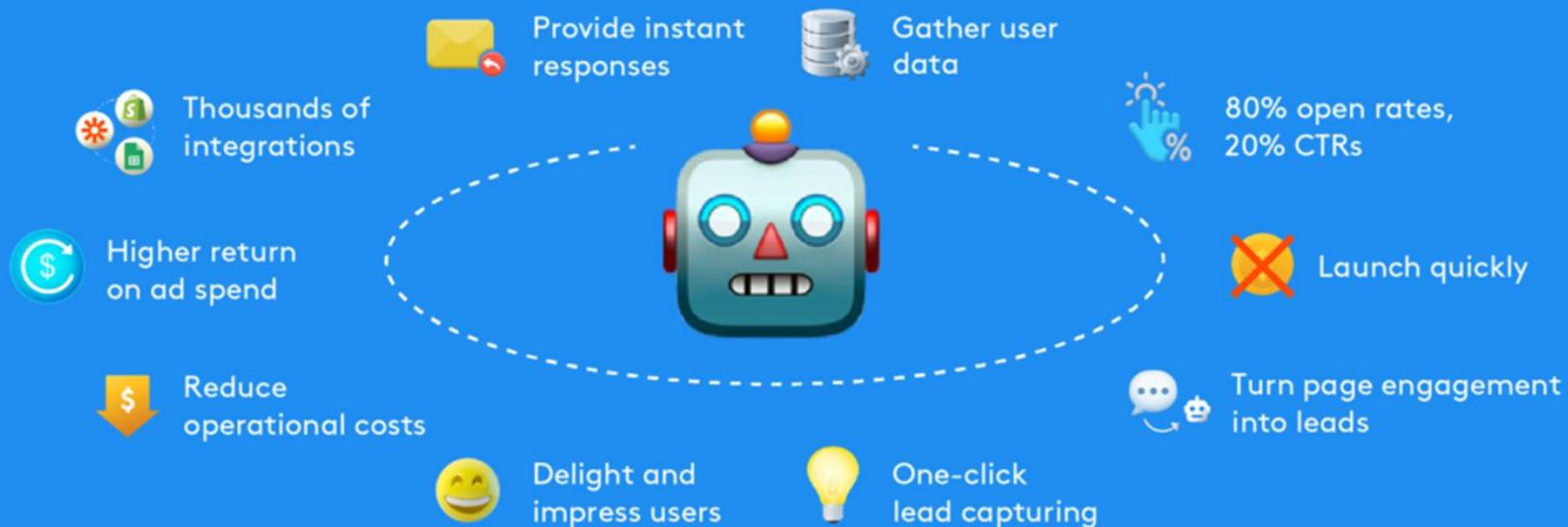
Returning the response

- once the user's intent has been identified, the chatbot must provide the most appropriate response for the user's request.



Why chatbots are important

10 reasons why your business needs a chatbot



chatfuel

Introduction to Rasa Open Source



- Rasa is an open-source machine learning framework for automated text and voice-based conversations.
- Understand messages, hold conversations, and connect to messaging channels and APIs.

How to deploy Rasa chatbot?

- Python Environmet Setup: Install Python 3.7.0, pip
- Virtual Environment Setup: Install NodeJS, npm install, Build Tools for Visual Studio 2019
- Install Rasa Open Source: Install rasa_nlu, setuptools
- Additional Dependencies: Insall rasa_nlu[spacy]
- Dependencies for Spacy
- Setup Rasa UI: <https://github.com/paschmann/rasa-ui>

Backend Works

Modify:

- package.json : fix error of wrong port for rasa_nlu
- rasa\rasa-ui-master\web\src\app\components\training\training.js : to generate data to JSON format
- to C:\rasa\rasa-ui-master\server\routes, open file rasa_router.js : fix routing navigation, create function to handle user's text, to make the chat bot responses, detect well intent and choose right response.
- C:\rasa\rasa-ui-master\web\src\app\components\chat\chat.js : modify chat UI and make chatbot detect bot name.
- \rasa\rasa-ui-master\server\db\bot.js : fix error of detecting and transferring bot's info
- Adding data.