SBC
Building a Chatbot

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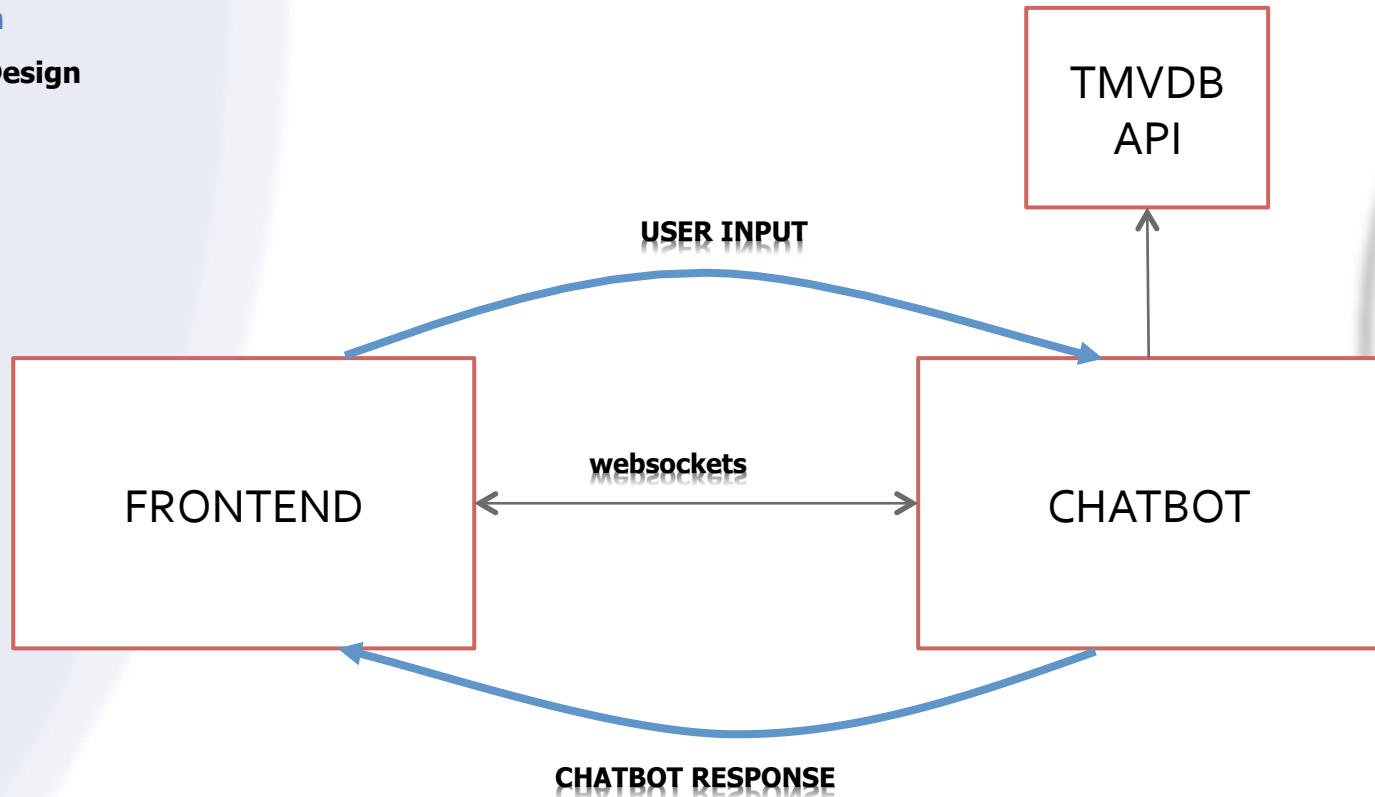ls28837@salle.url.edu

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- TV Shows information

- Based on the information provided by _themoviedb.org_ API.

- Some out of the topic capabilities to particular answers
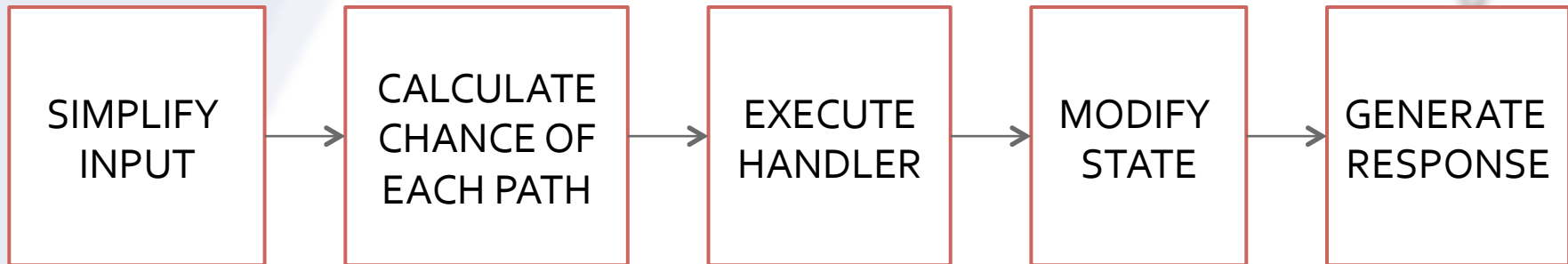
BIG PICTURE. Communication.

- **Chatbot Domain**
- **Chatbot Design**
- **Conversation Design**
- **Demo**
- **Limitations**

TMVDB API

USER INPUT

FRONTEND

websockets

CHATBOT

CHATBOT RESPONSE

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BIG PICTURE. Internal Flow.

- Simplification of input through **steeming of words**
  - *Tolerates derivations*

- Likelihood of path through calculation of **JaroWinkler distance**
  - *Tolerates misspelling*

| SIMPLIFY INPUT | → | CALCULATE CHANCE OF EACH PATH | → | EXECUTE HANDLER | → | MODIFY STATE | → | GENERATE RESPONSE |

- Inspired on *trainable decision trees* & some ideas from formal languages

- The conversation is modeled as a tree-form conversation flow

- The current point of the conversation flow is modeled as a state

- Each state has some directors, some paths out of the state.

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```
SEASON_STATE: []conversationPath{
    {directors: []directorOptions{
        {
            "tell",
            "explain",
            "inform",
        },
        {
            "about",
        },
    },
    executor: executeGetEpisodeInfo,
    prefixes: []parameterPrefixOptions{
        {
            "episod",
            "about",
        },
    },
},
```

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- Likelihood is calculated from a geometric mean from input's proximity to directors

- If no directors give a likelihood above a threshold jump back a conversation level

- If no directors match at all give a random default answer

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DEMO

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- Tolerance to different enouncements is just as good as the defined cases

- Directors on paths from different levels may overlap and not allow proper conversation advance

- The extent of the conversation is limited and in order to extend it new code has to be written.