



# Building your first conversational assistant: The Rasa approach

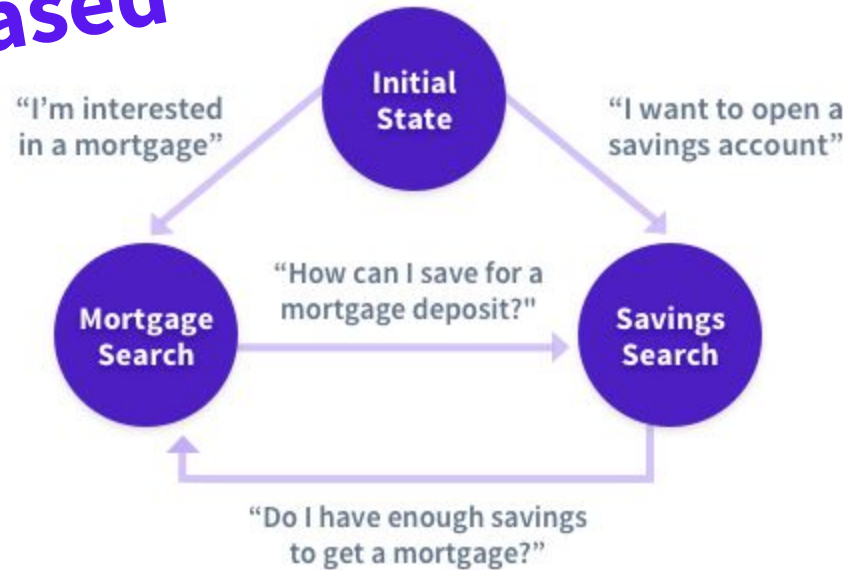
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**Then:** Humans look at data and write rules

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**Now:** ML algorithms train models based on data

# Rule-based



# Rule-based

- Build a state machine that maps out all conversational flows your assistant can handle
- Slow and costly to update

# Rasa Approach

ACME

Where should we send the confirmation to?

Please send it to amy@example.com



ACME

Should we make that your primary email?

Oh, what is it right now?



## Next best action:



fetch\_primary\_email

88%



hand\_off\_to\_human

8%



fetch\_primary\_phone

4%

# Rasa Approach

- Start with a few example conversations & learn from them
- Get your assistant in front of test users as soon as possible
- Use CI/CD to constantly retrain and improve your assistant

# Conversation-Driven Development

- Build a working prototype
- Share with testers
- Review conversations
- Annotate real data
- Test with end-to-end conversations
- Track desired outcomes
- Fix any problems that arise



# Conversation-Driven Development

- **Build a working prototype** ← We'll do this together today
- Share with testers
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# Conversation-Driven Development

- Build a working prototype
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- **Review conversations**
- **Annotate real data**
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- **Fix any problems that arise**

*Rasa X is a tool that helps you  
do all of this more quickly and  
efficiently*

# What's in a conversational AI?

- **Natural language understanding:** Take text input and convert it to a computer-readable format
- **Dialog policy:** How to decide what to say next
  - **Memoization policy:** If we've seen this sequence of turns before, repeat it exactly
  - **TED policy:** A flexible transformer-based policy that guesses at the best response based on the previous conversation
  - **Fallback policy:** What the assistant should do when it's not certain about the best response
- **Assistant responses:** Can be produced using Natural Language Generation (NLG) but more commonly provided verbatim

# Livecoding

# ML Learning resource recommender

I get asked a lot to recommend learning resources.

- Online course
- Video
- Book

# Get in touch!



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