Bot Friday Talk
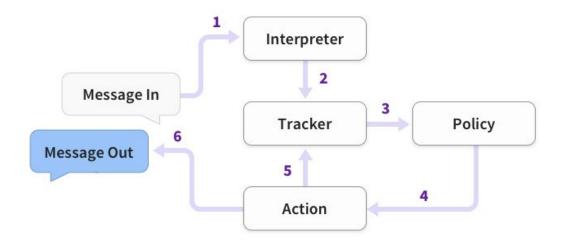
Rasa v1 New Features

梁皓然Simon
simon@x-tech.io

Rasa Architecture

- https://rasa.com/docs/rasa/user-guide/architecture/

Rasa Architecture Digest

- Interpreter - NLU - `(string) => { text, intent, entities }`
- Tracker - Full Conversation History + Slots
- Policy - Evaluate, predict then choose the best to determine next action
- Action - `(Tracker) => Array<Event>`

What's Cool about Rasa?

- 主流聊天机器人主要是NLU + FSM的设计
  - 简单 明确 稳定
  - 状态多起来的时候扩展难
- Rasa用ML的方式去把状态机的设计碎片化 通过训练特定的场景 自行判断下一步的动作
  - Tracker和Slot机制的灵活运用可以 获得当前状态 配合自定义Actions可以快速搭建局部的FSM
  - 不少Hard-coded Policies可以手动控制结果（Fallback, Direct Mapping, etc）
  - 上手难度大 需要控制和调整的变量多
  - 需要理解并拥抱不确定性 需要长期收集数据微调模型

Rasa V0 vs V1

- Combined NLU and Core
- Rasa X (more UI tools)
- External Storage (Tracker Store, Event Broker, Model Cloud Storage)
- NLG (Generator) Server

Experimental (added in V1.3):

- Retrieval Actions (一问一答的FAQ类消息的简化)
  - https://blog.rasa.com/response-retrieval-models/
- Knowledge Base Actions（灵活运用Tracker & Slots）
  - https://blog.rasa.com/set-up-a-knowledge-base-to-encode-domain-knowledge-for-rasa/
  - https://rasa.com/docs/rasa/core/knowledge-bases/

Live Demo

- Some old V0 code to build out similar features
- Peripheral Systems (Configurations on Pipelines / Policies, Action Servers)
- V1 FAQ + Knowledge Base Action (modified from Rasa upstream)
  - Heavily WIP, expect bugs

Notes

- Retrieval Actions大大简化了编写story的复杂度 配合NLG比较容易扩充
  - https://rasa.com/docs/rasa/core/responses/#creating-your-own-nlg-service-for-bot-responses
- Knowledge Base Actions比较好地诠释了Rasa架构的能力 尽管可能还比较早 但是配合一个搭建完善的知识图谱和在action层做更精细的控制 效果还是可控的

Hopes

- 把国内电商客服的功能放到国外平台 / 为跨境电商提供客服方案
- 通过自动化的推荐提高用户体验

- https://www.facebook.com/business/success/2-lego

Questions?

Thank you!

https://x-tech.io/zh
hi@x-tech.io