We choose intelligent chatbot or AI chatbot?

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Role of Medicine Information Dept. in Pharmaceutical Industry

Medical Information support

Customer → Enquiry → Operator → Response

Insights

Voice of Customer → Analyze → Medical Information Specialist

Knowledgebase

MR → Search → Data base → Collate relevant sources

Q&A scripts → Medical Information Specialist
How AI can help us, What Do We Want?

AI: Artificial Intelligence
“Everything should be made as simple as possible, but not simpler”

- 「吸湿性がある薬と分かっているが、一包化は可能か。入院中は1週間くらいの調剤で済むが、退院させたら1か月分くらいの調剤になると思う。」

How to response

Which information customer want

Why customer enquiry for us
Guiding Principles: Drives Our MI Strategy

- Create unbiased, evidence-based and critically evaluated information
- Provide comprehensive answers
- Provide consistency across channels

- Medical information provided by industry is the most accurate and up to date, given their product expertise and access to relevant data
- Medical information supports the safe and effective use of prescription products, thereby improving patient outcomes
Two Distinct Architectures

Natural Language Understanding → Rule based dialogue

Rule based dialogue → Deep learning based dialogue
## Scope and Topics

<table>
<thead>
<tr>
<th>In the scope</th>
<th>On topics</th>
<th>Off topics</th>
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</thead>
<tbody>
<tr>
<td>Products FAQ</td>
<td>Casual talk</td>
<td></td>
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<tr>
<td>Long tail QA</td>
<td>Nonsensical phrase</td>
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<tr>
<td>Out of scope</td>
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Conversation Capability and Response Mechanism

- Closed Domain
- Open Domain

- Question
- Answering

- Retrieval-Based
- Generative-Based

Starting Point
It requires time and effort

Enquiry → Natural Language Understanding → Dialog System → Natural Language Generation → Response

INPUT → Data → Data → Data → OUTPUT

Test
Powerful data sources to build Chatbot

- CRM
- Standard Q&A
- Call log
- Search log
This is a start for us
Thank you

& Questions