

Acceptance of and Interaction with AI - development and evaluation of an intelligent B2B Chatbot using a software as a service architecture with a recommender system at Krones.

Thema:

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Hintergrund

In the world of business customer satisfaction is very important. In our busy time it is increasingly difficult to process and answer all requests. Customers want to know everything about any kind of topic and best of all immediately. In recent years dialogue agents became more popular, because they grew more intelligent in understanding human language and more powerful backed by AI. As most requests come in form of text it is a reasonable conclusion to connect a chatbot with available company information and let them serve customer needs. The chatbot developed in this thesis will be used in the contact form to interact with customers. After understanding the need, it will have two main functions: 1. Give a suitable answer from the source data. 2. If the request cannot be resolved, gather more information about the request and send it to the right person or group. This should increase customer satisfaction through immediate feedback and reduce the workload in employees in distributing the request automatically.

Zielsetzung der Arbeit

This thesis wants to give an overview of the most popular Software as a Service architectures for building virtual dialogue agents. Furthermore, evaluate these platforms to give some valuable insight which platform should be used given this context. At the core a chatbot will be developed using a SaaS architecture for interaction with the customer. All company data must be made available for the chatbot to use. Therefore, former emails will be used to automate the transmission process with the help of machine learning. The answers from employees will be analyzed to feed the chatbot with common questions for information customers often forget to send with the request. Further information like FAQs will be made accessible. To match the customer's information need with the available information a recommender will be developed in the backend, who will rate the answers and interact with the SaaS architecture. In the end the chatbot will be evaluated first by company employees and then by real world customers with focus on the interaction and acceptance.

Konkrete Aufgaben

1. Akzeptanz- und Erfolgsfaktoren ermitteln in Vorbereitung auf die Evaluation
2. SaaS Architekturen den definierten Kriterien nach betrachten und vergleichen
3. Konzerninformationen aufbereiten - Model erstellen, wohin Anfragen geleitet werden sollen (Anhand von Emailverläufen) - Antworten auf Emails → häufig benötigte Information Klustern - FAQs - andere
4. Recommendersystem entwickeln, welches das Informationsbedürfnis auf die aufbereitete Information abbildet
5. Interaktionsdesign erstellen
6. Chatbot mit ausgewählter SaaS Architektur umsetzen
7. Evaluation mit Fokus auf Akzeptanz und Interaktion

Erwartete Vorkenntnisse

- JavaScript, besonders in Form von Node.js (mit Express.js)
- SQL Management Studio
- Tensor Flow
- SaaS Architekturen wie:
- Google DialogFlow
- IBM Watson
- Microsoft Botframework
- andere

Weiterführende Quellen

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