**INTRODUCTION**

This work gives a general introduction to chatbots by explaining what they are, what they

can be used for and how to develop them.

No previous domain-specific knowledge is required.

Lately as of writing topics around chatbots have received increasing attention from media

and also numerous investments from different actors in the industry. At the same time not

many potential users know about the existence of chatbots or about areas in which chatbots

could be helpful assistance. The topic is equally unknown to developers.

While the term chatbot is commonly used in media, the meaning mostly remains ambiguous.

There is a need for further explanation of what chatbots are and further analysis to identify

well suited applications for chatbots. Additionally to spreading knowledge about the

potentials of chatbots and their use cases, more developers should be enabled to create new,

innovative chatbots.

The lack of knowledge can be solved by providing answers to the questions of what chatbots

are, what benefits they bring and how to create them.

An appropriate definition of chatbots can be given by analyzing the fundamental meaning of

the term chatbot and by exploring past and current applications.

Use cases of chatbots can be identified in existing products. Market trends and attributes

of media and technology can be analyzed to find new potential scenarios for the usage of

chatbots.

Development is best explained by creating a real chatbot and by using it to present the

general principles of the development process.

Explaining what chatbots are, demystifying what to use them for and presenting how to create

them, will help more people to be able to use and create chatbots, and thereby, accelerate

the development of the chatbot ecosystem. Innovation in technology and the creation of new

solutions can help automating and simplifying more tasks, which gives people the opportunity

to focus on more interesting issues and accomplish more things. Chatbots have the potential

to simplify and automate many existing tasks and thereby accelerate the overall technological

progress.

The structure of this work follows the three main questions. To begin with, terminology is

defined and applications are explored to form a definition and understanding of what chatbots

are. Afterwards use cases of chatbots are identified not only through the collection of existing

examples, but also through the exploration of future potentials by analyzing attributes of the

relevant technologies. The second half of the work is a case study for the development of a

chatbot. The presented example guides through the process of designing user interactions

for a chatbot, and additionally explains architectural decisions and technological choices,

which provide a basis for other developers to build on when creating new chatbots in the

future.