

Virtual Assistant for Desktop

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Abstract: This paper presents a research project aimed at developing a virtual assistant for desktop computers that can perform a wide range of tasks using natural language processing and machine learning techniques. The virtual assistant is designed to assist users in performing various tasks, such as searching the web, managing files, scheduling appointments, and sending emails, among others. The proposed system uses a combination of speech recognition, natural language understanding, and dialogue management techniques to enable users to interact with the assistant using spoken language. The research project involves several phases, including data collection and preprocessing, feature extraction, model training and evaluation, and system integration and testing. The data used for training and evaluation are collected from various sources, including publicly available datasets and user interactions with the system. The feature extraction process involves extracting relevant features from the collected data, such as acoustic features, linguistic features, and contextual features. The model training and evaluation phase involves developing and testing different machine learning models for various tasks, such as speech recognition, natural language understanding, and dialogue management. The models are evaluated using standard metrics, such as accuracy, precision, recall, and F1-score, to ensure their effectiveness and efficiency. The system integration and testing phase involves integrating the different components of the system and testing the overall system performance and usability. The system is evaluated using user studies and surveys to gather feedback and improve its design and functionality. The proposed virtual assistant has the potential to revolutionize the way users interact with their desktop computers, providing a more intuitive and efficient way to perform various tasks. The research project contributes to the field of natural language processing and machine learning, demonstrating the effectiveness and potential of these techniques in developing intelligent systems for real-world applications.

Keywords: Virtual Desktop

REFERENCES

- [1] "Desktop Virtual Assistant" by Smita Srivastava, Dr. Devesh Katiyar, and Mr. Gaurav Goel presents a desktop virtual assistant developed in March 2022.
- [2] "Desktop Voice Assistant" by Vishal Kumar Dhanraj, Lokeshkriplani Semal, and Mahajan focuses on the development of a desktop voice assistant, which was created in February 2022.
- [3] "Desktop Voice Assistant" by Gaurav Agrawal, Harsh Gupta, Divyanshu Jain, Chin-may Jain, and Prof. Ronak Jain presents a desktop voice assistant developed in May 2020.
- [4] "The Technological Gap Between Virtual Assistants and Recommendation Systems" by Dimitrios Rafailidis from Maastricht University and Yannis Manolopoulos from Aristotle University of Thessaloniki, published in January 2019.
- [5] "Designing of Virtual Desktop Assistant using Machine Learning" by Vijaya Balpande, Vedanti Lute, Neha Pawar, Saniya Sadaf, and Aayush Jain describes the development of a virtual desktop assistant using machine learning techniques. The assistant is developed using Python and was created in April 2022.