Capstone Project

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* Referred to Research Papers
* Focused on Methodology and Workflow and constructed the Literature Survey
* Literature Survey

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| Paper | Observation |
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| Benefits, Limits, and Risks of GPT-4 as an AI Chatbot for Medicine | * It is a theoretical study on the subject of using GPT 4 and similar Generative AI tools such as Google LaMDA and GPT 3.5 in Medical conversational ChatBOTs * Advantages include GPT’s wide range of Knowledge which can be obtained from the Web which can be to conduct day to day Medical Conversations * Test Models have been done in universities and got an accuracy close to 90 % * Drawbacks include authenticity of Data obtained from the web . This can be further improved on by training model on authentic datasets from Hospitals . |
| Speech emotion recognition using machine learning - A systematic review. | * This paper talks on the property , methodology and working of SER model in detail . * It consists data from a literature review of over 236 papers and proposes a proper methodology to efficiently analyse data using SER * Comparative study of advantages of SER against other Machine Learning Algorithms * Conclusion talks on future scope of SER being used in Medical Diagnosis |
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| Development of the Speech-to-Text Chatbot Interface Based on Google API | * data from social networks, focusing on remote and local storage processes. It utilizes the Google Speech-to-Text API for transcription due to its reliability and language support, aiming to enhance user engagement and enable future machine learning endeavors. * The proposed method involves employing prefix functions and hashing algorithms for keyword searching and verb ending identification in chatbot conversations. The chatbot algorithm, named "Hashbot," utilizes the Rabin-Karp algorithm combined with hash functions for efficient substring searches in text, followed by identifying verb endings using the Knuth-Pratt algorithm * The technical implementation involves building the system in Python using the Flask web framework for direct communication with the Telegram API. Hosting is done on the Heroku Cloud Application Platform, offering support for various languages and databases. The chatbot operates on a rule-based approach and utilizes Google's Speech-to-Text API for audio transcription, with audio files uploaded to Google's endpoint and transcribed using the provided script. |
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| Machine learning-based speech recognition system for nursing documentation – A pilot study | * The study evaluates a machine learning-based speech recognition (SR) system's effectiveness in reducing nursing documentation workload in a psychiatry ward. * the study collected language corpus, nursing activities, clinical conversations, and accent data for SR system training. * Involving 21 nurses over four sessions, the study compared documentation time and recognition error rates between SR-generated records and keyboard entry, showing an improvement in SR accuracy from 87.06% to 95.07% across sessions. |
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