A Survey on Speech Recognition in Medical Care

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ABSTRACT: Nowadays, most users carry high computing power mobile devices where speech recognition is certainly one of the main technologies available in every modern smartphone, although battery draining, and resource shortagehas a big impact on the experienced quality. However, the quality of speech recognition is still not enough in many complex cases to replace the common hand-written text, especially when prompt reaction to short-term provisioning requests is required. To address the new scenario, this paper proposes a mobile information from speech recognition in the Social Care domain, where curers must speak about their patients' conditions in order to have reliable notes used afterward to plan the best support. We presentreal prototype that we have deployed and thoroughly assessed with different queries, accents, and in presence of load peaks. In our application for social care we are using text to speech conversion. User can fix appointments from home itself and ask idea about wounds/accidents and cold once he visited the doctor. Doctor will reply them accordingly.

I.INTRODUCTION

Cloud computing architectures have gained more and more momentum in recent years and most vendors are looking at them to provide feasible solutions for optimal exploitation of their own infrastructures. At the same time, the ever-increasing wireless connection bandwidths, hardware memory, and processing capabilities have boosted the spreading of new mobile devices, such as smart phones, tablets, and net books. Not with standing their great potential, mobile devices exhibit still strict constraints on local resources and mobile support design typically focuses on saving the most precious energy resource; for this reason, applications that require high amounts of processing power and resources.

The exploitation of the Mobile Cloud Computing paradigm can leverage the design and deployment of several mobile applications whose potential is currently limited by the strict constraints on mobile devices. Mobile speech recognition represents a significant mobile application example that can take advantage of the Mobile Cloud to extend its functionalities by offloading intensive memory and computation tasks to the cloud. This paper proposes Moss CA as a novel mobile cloud-enabled speech recognition framework for social care delivery that can provide semantic-enriched text recognition, hardly feasible on mobile devices without mobile cloud support architecture. Moss CA exploits the mobile cloud infrastructure to enrich text obtained from the speech with semantic content and based on semantic annotations to allow mobile devices to interpret and reason about the meaning of the text and the context the text relates to. Social workers can obtain with Moss CA a more reliable, effective, and device's battery-saving experience that can reduce their diffidence in relying on speech recognition instead of taking notes.

II.LITERATURE SURVEY

Jont B. Allen "How do humans process and recognize speech?". In this paper they have mentioned about the basic principles of human speech recognition (HSR). But they have not yet implemented this study in any medical field.
John H L Hansen "Discrete-time Processing of speech signals". In this book it covers the essential aspects of modern speech processing like analysis, synthesis and coding, enhancement and quality assessment, and recognition.
Vaishnavi Varadarajan, "Analysis and Compensation of Lombard Speech Across Noise Type and Levels with Application to In-Set/Out-of-Set Speaker Recognition",

III.EXISTING SYSTEM

In existing system, there was no other solutions to shift the written text to speech or something else. The quality of speech recognition is still not enough in many complex cases to replace the common hand-written text. No any application can directly communicate with the doctor using cloud computing.
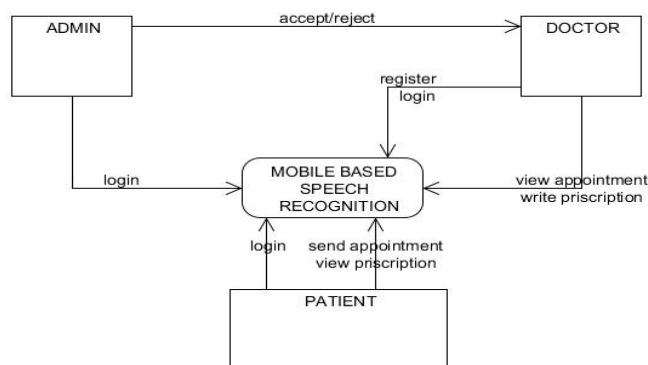
IV.GENERAL DATA FLOW DIAGRAM

Figure 1.1

- Data flow diagram explains the working of modules i.e., Admin, Doctor, Patient.

V.PROPOSED SYSTEM

However, the quality of speech recognition is still not enough in many complex cases to replace the common handwritten text, especially when prompt reaction to short-term provisioning requests is required. To address the new scenario, this paper proposes a Speech Recognition in social care.

information from speech recognition in the Social Care domain, where curer's having to speak about their patients' conditions in order to have reliable notes used afterward to plan the best support. We present not only an architecture proposal, but also a real prototype that we have deployed and thoroughly assessed with different queries, accents, and in presence of load peaks
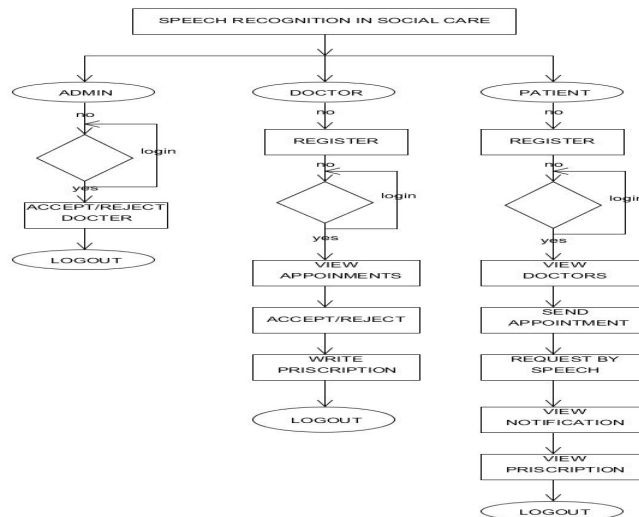
VI.FLOW CHART

Figure 1.2

- Flow chart explains the role of each module in this application.

VII.MODULES DESCRIPTION
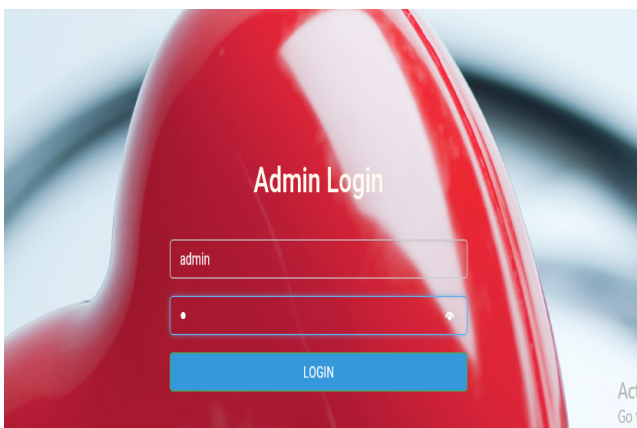
ADMIN'S MODULE:
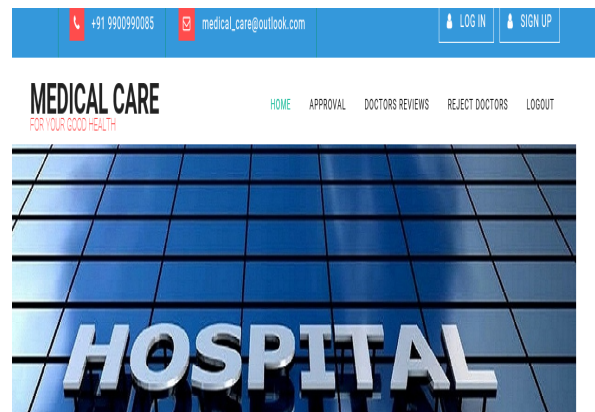

Figure 1.3a(admin's login page)

Figure 1.3b (admin page)

- Login to the admin page.
- Admin will view the Doctor's request and approve or reject them based on their qualification or reviews by patients.
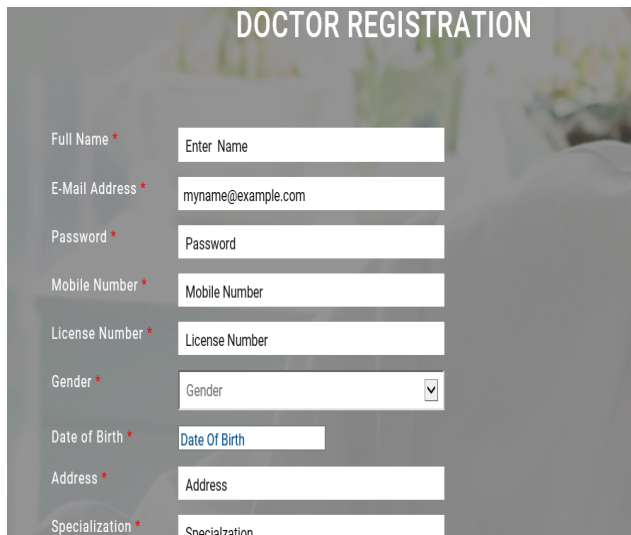- Logout

DOCTOR'S MODULE:

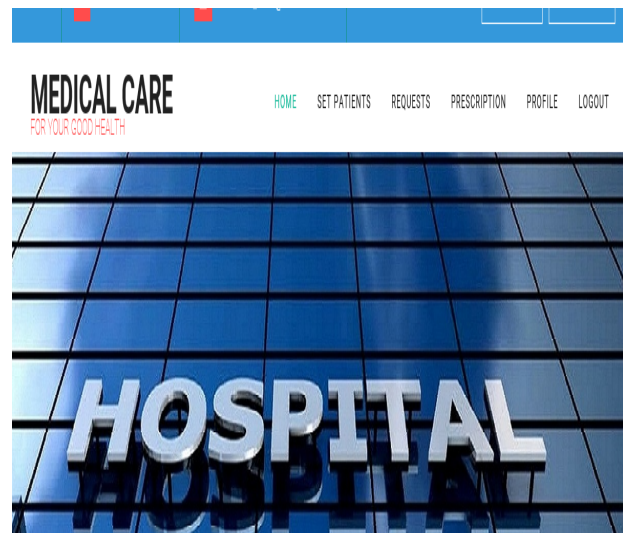

Figure 1.4a(doctor registration page)

Figure 1.4b(doctor's home page)

- Doctor gets registered or login.
- Doctor set patients limit for the day.
- Doctor will view the requests sent by the patients.
- Doctor give's prescription for patient's health issue.
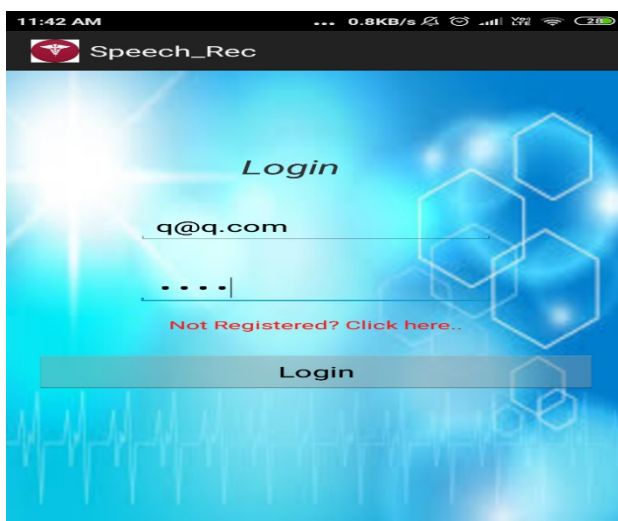
PATIENT'S MODULE:

Figure 1.5a(patients login page)

Figure 1.5b(patients home page)

Figure 1.5c(Set Appointment)

- Patient gets login
- Patient views doctors and views doctors in map
- Patient books appointment
- Patient gives description of his/her health through speech
- Patient views prescription.

VIII.CONCLUSION

This work paves the way to a new generation of mobile speech recognition in several application domains. We have demonstrated the effectiveness of Moss CA for the Health and Social Care domain, but our proposed framework can be considered a general-purpose mobile cloud-enabled speech recognition system. In fact, the knowledge bases and the main settings are easily suitable for different use cases and Moss CA adoption could then be very useful in a large variety of different situations not related to the Social Care specific field.

IX.FUTURE SCOPE

Speech recognition is a challenging problem to deal with. We have attempted to provide a review of how much this technology has progressed in the previous years. Speech recognition is one of the most integrating areas of machine intelligence, since humans do a daily activity of speech recognition. It has created a good technological impact on society as well as, is expected to flourish further in future as an area of human machine interaction.

REFERENCES

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BIOGRAPHY

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