

Hong Kong Outstanding IT School Award

2014

"IT - Makes Life Easier"

ANALYSIS

Audio

Text

Tone

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Background

More and more people are sending messages through web-based instant messaging applications(IM apps) like WeChat, Whatsapp,Viber and Line. Their common features includes group chat, photo sharing,voice chat and text chat.

It is estimated that mobile operators have lost \$23 billion in 2012 only because teens have sent less text messages and preferred to communicate with their friends using IM apps. According to KRDS, the social media agency, there are 100 daily active users of WeChat and 350 million monthly active users of Whatsapp all over the world. It is a global trend that IM apps are grabbing more and more market share.

IM apps have saved us time, energy and money but nevertheless there are bound to be limitations. Since we are not having face to face communications while using IM apps, we cannot know exactly the tone and the emotions that the sender is trying to express.

In order to overcome these shortages, we will be focusing on designing a personal assistant and knowledge navigator which can help identify the tone of text and voice messages, hence giving advice to the receiver on how to reply the messages appropriately.

Where does our idea come from?

Siri was introduced as an application for Apple Inc.'s iOS. Using voice recognition technology, Siri can act as a personal assistant and tackle with the daily routine of the user, for example, schedule meetings, place phone calls, find a restaurant, etc.

We are interested in the idea of personal assistant applications and hence we focus on how smartphone users can be benefited.

IM apps are popular and are installed by most electronic devices owners. However, since messaging does not belong to any kind of face to face communications, genuine emotions may not be delivered accurately. Therefore we come up with this application which can help the users understand them and communicate better while using IM apps.

IM Apps	Texting	Voice note
BBM	p	p
ChatON	p	p
Facebook Messenger	p	p
Fring	p	
Hangouts	p	
IOS7/ iMessage	p	
Kakaotalk	p	p
Kik	p	
Line	p	p
Wechat	p	p
Whatsapp	p	p
Yahoo Messenger	p	

Product design

The product we will be inventing is an application called “Imfun”

“Imfun” is a personal assistant which is able to analyse the text messages and tonal languages sent through IM apps. Besides, it can also check the tone of ready-to-send messages of the user. It has a cloud-based database and stores text messages of people for analysis. It can be implemented in both IOS and Android system.

With this app:

- voice messages and text messages received are analysed
- ready-to-send messages are analysed
- decent suggestions on how to reply a message are given
- past chat records are analysed to get you familiarized with your friends' hobbies
- with one click you can access their birthday and get notifications

“Imfun” is able to analyse the past chat records, text messages and voice messages from individuals. At the same time, it can give the user a brand new experience of using IM apps.

When the users receive messages, “Imfun” compare them with the data stored in the database in terms of the use of wordings or tonal language. The possible sentiments that the sender is trying to express can be identified. For example, when the messages contains negative wordings or foul language, the wordings are compared with those stored in the database and it is analysed that the sender is having negative feelings and strong emotions like moroseness and anger.

When the user has typed a message and is ready to send it, he can double check his tone before he sends it so as to avoid overreaction and inappropriate replies.

With the sentiments identified, “Imfun” can provide the users with suitable and appropriate suggestions on how to reply decently and deal with the original sender.

“Imfun” is capable of analysing the past records of the user and different contacts. Thus, “Imfun” can figure out the habit of the use of words of individuals, their hobbies and things that he/she likes or needs, so that the user can buy his/her friend the most suitable birthday gift.

With the permission of the user, “Imfun” can connect with various social media platform and access the birthdays of the user’s contacts. It will give notification one or two weeks before and make recommendations on birthday gifts and the ways for celebration (based on the previous chat record analyzed).

How does it work?

Double-check ready-to-send messages

After installation, the device will be connected to the cloud. The messages received will be compared with the data stored in the database and being analyzed to get the tone of the user’s ready-to-send messages. (See the following figure as an illustration)

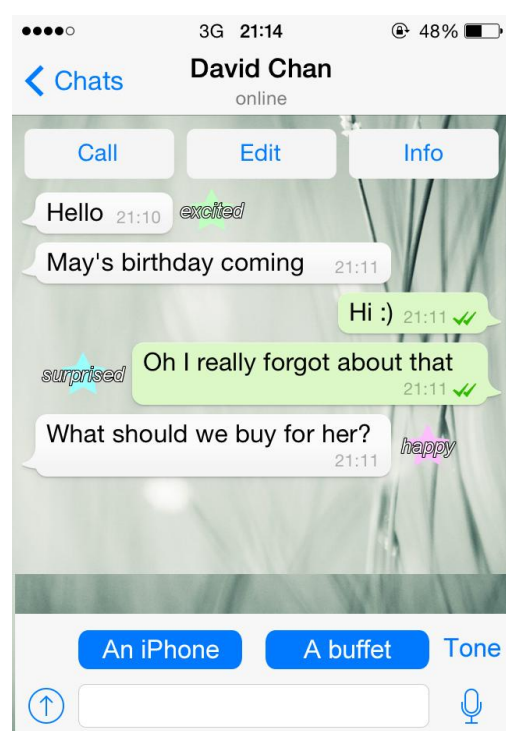
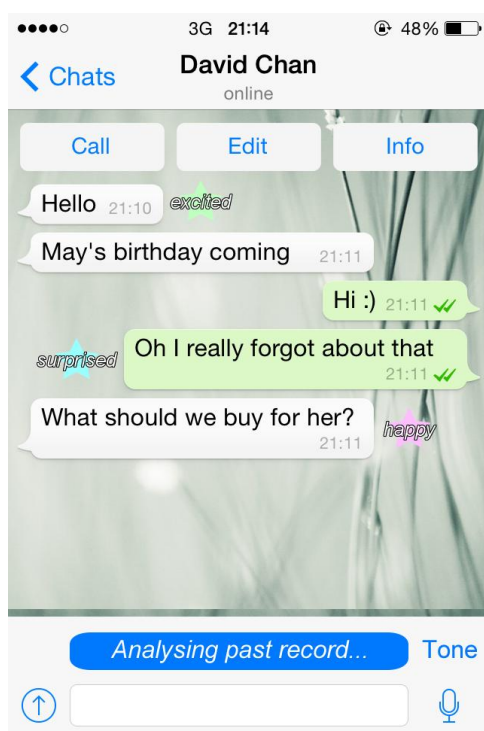


It will alleviate the user’s negative feelings and give him some advices on how to reply the message in a better way.



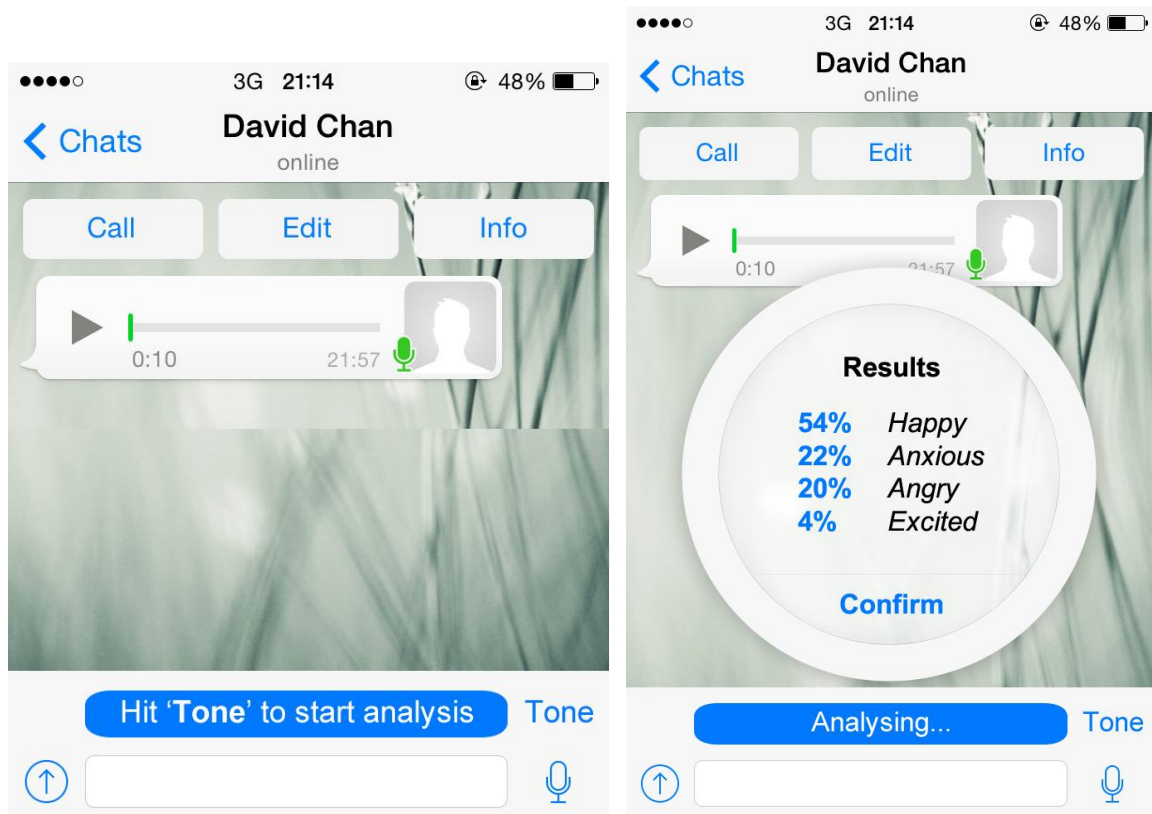
Analyze past records

When the user is asked a question, the past chat records related to that certain topic will be analyzed and recommendations can be given accordingly. (See the figures shown below for instance)



Analyse audio messages

When the user is uncertain about the emotions of the message sender due to flat tone of voice, our app is capable of analyzing both the wordings, the pace and the tone of the voice messages by comparing the audio with the data stored in the database.



Get notifications of your friends' birthdays

With one click the user can sync his/her contacts and connect to Facebook. The user can access his/her contacts' birthday directly in our app and hence notifications can be given.



Benefits of our product

- Inconvenience and misunderstanding caused by non face-to-face communication can be reduced greatly.
- People will be able to prepare better for their friends and family members' birthday.
- By concerning about others, relationships can be enhanced.
- Help the user to think of some surprising and decent response that he/she may not be able to think of.
- Because of fast and busy lifestyle, people usually cannot memorize all of their friends' birthdays. "Imfun" help reduce the possibility.
- With more people providing them text messages to the database, accuracy of analysis can be increased.

Drawbacks of our product

- The user may not use all functions of this app while data traffic or Wi-Fi is not available, as the database is web-based.
- Critical data may not be masked by the cloud providers.
- This app may not analyze the data of the user's friends that are not in the contact list.

Working Schedule

Time	Work	People required
Mid April	Preparation for presentation (PowerPoint, video, simulation)	5
Beginning of May	Research for the information related to our design	5
Whole June	Finalize the information to be displayed Writing programs for simulation of the apps	5 2
First Week of July	Prepare the design for the booth	2
Second Week of July	Finalize the design for the booth Prepare the materials used for the booth and display board Assembling the simulation of the apps	2 2 3
Third Week of July	Testing on the function of the apps	2
Late of July	Finish the simulation of the apps	2
Beginning of August	Ready for whole booth (apps, display board, etc.)	5

List of references

Top 10 instant messaging app

<http://www.entrepreneur.com/dbimages/article/top-10-apps-instant-messaging-infographic.jpg>

WhatsApp not really the biggest messaging app in Asia

<http://timesofindia.indiatimes.com/tech/tech-news/WhatsApp-not-really-the-biggest-messaging-app-in-Asia/articleshow/30846811.cms>

Cloud computing security

http://en.wikipedia.org/wiki/Cloud_computing_security

Siri

<http://en.wikipedia.org/wiki/Siri>

iOS 7: Siri starts to shine

<http://www.tuaw.com/2013/09/18/ios-7-siri-starts-to-shine/>

生日提醒 (農曆/ 西曆) - Birthday Sweet

<https://itunes.apple.com/hk/app/sheng-ri-ti-xing-nong-li-xi/id367346406?l=zh&mt=8>

-End of the proposal-