Abstract

@ViaggiaTrentoBot
Telegram Bot for sustainable mobility
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Background

The project idea is born during an internship at the Bruno Kessler Foundation, where I met for the 1st time the informatics projects for sustainable mobility. A topic deeply rooted in the nowadays life.

I tried to design and code a system for smartphone mobile which collects and shows every information about the urban mobility of Trento.

My aim is to find an efficient and immediate method to spread info about trains, buses, parkings and bike sharing services in Trento, in order to promote the use of greener vehicles.

I found, as best mean for this purpose, the Telegram Bots, mainly used by young people.

Project description

@ViaggiaTrentoBot is a Telegram Bot developed in Java programming language. It gives information about bus and train timetable, available parking slots and bike sharing spots in Trento. It can talk 4 different languages: Italian, English, German and French.

The Bot takes advantage of the so-called Open Data of Trentino Trasporti, e.motion, and the Municipality of Trento, cataloged by Smart Community Lab (FBK) in the Open Services portal.

To sum up, @ViaggiaTrentoBot works as interlocutor and links the user with the database. A fast and accurate “search” command.

@ViaggiaTrento is open source:

https://github.com/smartcommunitylab/sco.viaggiatelegram

One of the goals that I have been focusing on during the development of @ViaggiaTrentoBot concerns the modularity and therefore the reusability of the code.

During the days I spent in front of the software, I realized the coding of an open source library, now available on GitHub and Maven useful for the programming of Telegram Bots.

Whoever decides to implement it, will deal with a widely tested updates management system, which takes its cue from Java servlets behavior.

The design takes into account the Human-Computer Interaction (HCI), making the use of the chatbot as intuitive as possible to the newbies.
The user must receive the searched information with the least number of interactions possible. Here there is a simple and practical example which explains just one of the several functions of the chatbot.

Let say you need to catch the bus to reach the University:

- You easily question @ViaggiaTrentoBot typing the name of the bus line
- The bot replays you with the current timetable and name of the stops
- From here it’s just a tap to check the previous or the following busses

Conclusions

@ViaggiaTrentoBot is for me a success.

I played the game and I took care of a project from the ground zero, from the initial little idea to the design, from the realization to the search of partners up to the chatbot promotion.

I managed with a chatbot to communicate updating information autonomously, constantly and automatically.

@ViaggiaTrentoBot is used right now by over 650 people. Some of these contacted me to propose features and others contributed to its spreading by translating (on crowdin) the bot messages into German and French.

Thus, to be said, a few weeks after its official release, @ViaggiaTrentoBot became already part of Trento Smart City, the European project for the development of smart cities.

http://www.comune.trento.it/
Aree-tematiche/Smart-city/
Cos-e-TrentoSmart-City

Credits

Thanks to Fondazione Bruno Kessler, Smart Community Lab, and the Municipality of Trento for their collaboration.