

R-ALERGO app that helps to improve the quality of life of people prone to allergic reactions

DESCRIPCIÓN DE LA INVENCION

Researchers at the Universitat Politècnica de València (UPV), the Institute of Health Research at the La Fe Hospital (IIS/HUP La Fe) and the Valencia Cartographic Institute (ICV) have developed a system called R-ALERGO; an app that helps to improve the quality of life of people prone to allergic reactions while travelling in the city of Valencia.

The app, which is especially designed for sufferers of respiratory allergies, recommends the most suitable route, thereby avoiding exposure to allergens.

The most favourable route is interpreted as the choice of journey via which the user will run the least risk of incurring allergic reactions according to personal, environmental and urban conditions. R-ALERGO allows the user to know the potential allergenic exposure by selecting a route or location within the city limits. The types of respiratory allergens that have been taken into account are: pollen, mites, epithelia, fungi and insects.

With the help of simple software, easy to use language and easily understandable screens, the user can create a virtual profile by introducing his or her own epidemiological data (age, weight, size, occupation, origin) and data relating to allergies (allergies to pollen, mites, epithelia, fungi etc.). R-ALERGO combines this information with environmental parameters (type of environment, climatology, season, humidity, wind direction, pollen

concentration, potential pollution levels...) and the geolocation of the mobile phone.

The app then proposes “the healthiest route for your respiratory allergy” to the user from their current location to a chosen destination.

In order to develop the app, researchers have used a cartography called “Cartociudad” created by the ICV within the area of the city of Valencia. The provision of data via the portal “Valencia open data” provided by Valencia city hall has been fundamental in its development, and has been instrumental in mapping all the trees, areas of standing water, etc. in the city.

With regard to meteorological forecast data that are needed for the application (temperature, wind direction and relative humidity), these are obtained from the State Meteorological Agency. This information is complemented by data obtained via the ICV cartography, Valencia city hall and information from the Land Registry, allowing the app to obtain outlines of potential aggravation of allergies, mainly in open plots or vacant lots, green spaces and standing water.

The app also includes data on daily average intensity (DAI) of vehicles registered by Valencia city hall, as well as information gathered from pollen counting stations available in the city. The allergenic information management has been agreed with the Allergy Service of the La Fe Hospital in Valencia.

SECTORS OF BUSINESS APPLICATION

The target sector to which this technology can be transferred and used is the health sector.

This app helps users to reduce exposure to allergens within urban areas, thereby avoiding the development of respiratory symptoms.

TECHINCAL ADVANTAGES AND BUSINESS BENEFITS

The advantages offered by this app are:

- It allows the user to know the potential allergenic exposure when selecting a route or location within the city.
- Ease of use
- Smart interface

Large quantity of cartographic, meteorological and land-related information

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STATE OF DEVELOPMENT OF THE TECHNOLOGY

The app is free and can be downloaded from the project website www.ralergo.com as well as from Google Play and AppStore

INDUSTRIAL PROPERTY RIGHTS

The property rights to the R-Alergo application and its results belong to the Universitat Politècnica de València (UPV), the Instituto de Investigación Sanitaria of the Hospital La Fe (IIS/HUP La Fe) and the Instituto Cartográfico Valenciano (ICV).

COLLABORATION NEEDED

Possibility of new development and expansion to other cities

RELATED IMAGES



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