An innovative application helping people to reduce water consumption in domestic gardens

Unnecessary watering of domestic and public gardens wastes significant quantities of water every year. For this reason, we have developed Garden Monitor, a mobile application which supports efficient water management in gardens. Garden Monitor forecasts the conditions of a garden over the following ten days and generates a customized calendar advising users on whether and when they may need to water their garden. It also produces a historical record of a garden in terms of soil moisture, temperature, rainfall and so on, allowing users to monitor the status of their garden and to understand how it reacts to seasonal changes.

Garden Monitor integrates data from multiple sources, including garden sensors (recording data such as soil moisture, soil temperature, ambient temperature, light intensity, infrared ratio), personal and public weather stations (rainfall, temperature, wind speed) and weather forecasts (rainfall, temperature, pressure, humidity). This information is processed by a machine-learning model which over time learns the behaviour of a garden with respect to loss of soil moisture and estimates how the garden will react to different meteorological conditions. After a few weeks, the application is able to produce suggestions strongly tailored to a specific garden and its peculiarities (e.g. soil composition.)

We are currently starting an evaluation of Garden Monitor in Milton Keynes in order to assess the performance of its learning engine, value to users, and usability. To this end we are looking for early testers keen to try this new technology in their garden. If you are interested in the evaluation, please contact us at gardenmonitor@open.ac.uk.