

Smart Farming

Qushta, Rowan (School: STEM School of Alexandria)

Eltawil, Yasmeen (School: STEM School of Alexandria)

Water is the most essential need in many fields. Egypt's current state of water security is bleak, as it already has a water deficit of 30 billion cubic meters. Nowadays water scarcity is a big concern for farming. However, A further decrease in water supply would lead to a decline in arable land available for agriculture. Egypt could run out of water by the year 2025. Our project will help farmers to grow bigger and better crops in less time, with less effort, and at lower cost. Our project (Smart-farming³) consists of 3 systems connected together. 1st: an irrigation system based on arduino and soil moisture sensor. 2nd: Rain prediction system based on rain drop sensor. 3rd: Plants growth rate acceleration system using magnetized seeds and water. These 3 systems together will save the water usage in agriculture, increase crop yields, reduce the cost of fertilizers and pesticides.