**Graduation Project - English Abstract**

|  |  |
| --- | --- |
| **Project Code:** | **AI09** |
| **Project Title (in English):** | **Plantera Farm automation system** |
| **Project Title (in Arabic):** | **بلانتيرا نظام المزارع الذكيه** |
| **Scientific Department:** | **Artificial intelligence** |
| **Supervisor(s):** | **DR . Mahmoud Abd El Aal** |
| **Project Team:** | 1-Ahmed Muhammad Morsi Muhammad2-Amira Ahmed Fathy Khater3-Dina Abdallah Muhammed Abdallah4-Mariam Hossam Goda Diab5-Osama Mohamed Hussein Abdelfatah6-Osama Sayed Ahmed Sharaf |

**Abstract**

Research idea: Our project is using an IOT system to automate water irrigation and other minerals entering the soil. Also, we use AI, Deep Learning, and Computer Vision algorithms to help detect plant disease and give recommendations to the user, and to help detect crop yield detection and that’s done by integrating software that can take care of plants with minimal need for farmers and gives the users the control they need over their farms.

Problems: Traditional methods that farmers use are not sufficient which leads them to use the wrong ways to produce more food resulting in destroying the soil and resulting in crop diseases

Aims: We aim to help automate as many farms as possible, so we can produce more healthy products, with minimal minerals, and water used, and with minimal effort from the user.

Main results: The use of AI-powered systems in farm automation and plant disease detection has. These systems have the potential to significantly increase crop yields, reduce labor costs, and improve the overall efficiency of farming operations. Leveraging machine learning algorithms and computer vision technology allowing farmers to take timely action to prevent crop losses.