**Artificial Intelligence based Large Language model(LLM) for mobile phone alerts to enhance Biocontrol methods**

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**Abstract**

A mobile application is a novel Information and Communication Technology (ICT) tool designed to run on a mobile device such as phone, tablet which helps to disseminate the knowledge in an easy and fast manner. Mobile application makes the user to feel an interactive way because of it’s ability to convey the information in multimedia mode. In the current scenario, mobile phones are being used as a best communication device and it is very handy. Farming advisory system is required for effective pest management. Biological control method is safe to the environment and human health. Dissemination of biological control methods and timely advisory system to the farmers is needed now-a-days to take up the proper control measures in time. Artificial intelligence based Large Language Model (LLM) has been developed to send the alerts to the farmer’s mobile phones. This model is mainly designed to understand the pest problems in the crop field and to advise about biological control methods. The proposed model performs various types of Natural Language Processing (NLP) task and LLM Chat Bots and helps in clarifying queries from the various types users viz., researchers, students and farmers about the pest management. Presently, this model contains large amount of text data of biocontrol methods especially for tomato pests and its natural enemies. This application can be integrated with mobile applications for prompt alert to the farmers which helps to increase the crop productivity and for safer environment.

**Keywords:** Mobile phone alerts, AI , Pest management, Large Language Model, Natural Language Processing, Biological control, Tomato