PREFACE

In the northern part of Maharashtra, cotton is one of the commercially major agricultural commodities, but due to various pests and diseases, it is primarily suffering from damage to its leaves. With deep learning technology, treatment, and disease prediction from plant images may be done precisely and effectively. Therefore, it's essential to identify and treat cotton diseases as soon as possible to ensure effective crop management and minimize financial losses. Deep learning has significantly increased the identification accuracy of picture categorization and object detection systems in recent years.

Cotton productivity and quality are significantly impacted negatively by cotton diseases. Identification of cotton disease types quickly and accurately is crucial. Several image-processing approaches have been developed to discover leaf disease. Initially, discoveries in technology made everything easier and quicker. One of the major cash crops in the world is cotton, and various diseases have a big impact on how much cotton is produced. This study suggests a deep learning approach for identifying cotton diseases.

The model developed has a significant amount of practical uses for managing and detecting cotton diseases. This improves the effectiveness of cotton disease diagnosis, allowing for proactive disease control methods and increased cotton yield.