ACKNOWLEDGEMENTS

I express my sincere gratitude to my research supervisor Prof. Shikhar Kr. Sarma, Professor and Head, Department of Information Technology, Gauhati University for his expert guidance, invaluable suggestions, encouragement and keen interest in the conception planning and execution of the study. It is a great honour and privilege to complete the present study under his supervision.

I am thankful to Prof. Anjana Kakoty Mahanta, Professor and Head, Department of Computer Science, Gauhati University for extending necessary facilities, support and advice for the study.

I extend my sincere thanks to the entire faculty and staff of the Computer Science Department for their cooperation and encouragement during my research.

I am indebted to Dr. M. Thoithoi Singh, SMS Plant Protection, Wangbal Rice Research Station, Krishi Vigyan Kendra, Thoubal, Manipur in giving shape to my ideas and for being the source of support in my study.

I am also thankful to Dr. Kh. Ibohal Singh, Senior Asst. Professor, Department of Entomology, Central Agricultural University, Imphal, Manipur for his valuable information and suggestions.

I would like to express my sincere thanks and deep appreciation to my dear friends L. Premchand Singh and Abhijeet Singh for their helps and discussions we had in the technical development of study during my course of research work.

I express my deep sense of gratitude to my elder brother Kh. Jotin Singh, who has always encouraged me and supported me throughout every step of my life making it possible for me to become who I am and where I am today. Words of acknowledgement would remain incomplete and out of time if I do not express my sincere and deep sense of indebtedness to my brother Kh. Shanta Singh, and my sister Kh. Bidyarani Devi for their constant motivation, support, encouragement and willingness to help throughout the period of my study and for upholding me with their prayers.
My heartfelt acknowledgement and thanks extended to my relatives, teachers, friends and well wishers of personal and professional arena who have assisted, guided and cooperated directly and indirectly and for constantly encouraging me to go ahead.

And last but not the least, I proposed my sincere thanks to the author(s) who have contributed a number of research papers, articles and other forms of literature, especially those I have consulted in my study.

Above all, I express my deep sense of gratitude to "God" the guiding source behind all human efforts, who guide and direct life and who always have been a great source of strength, wisdom and enlightening force behind all efforts in making this thesis a success.

I finally dedicate the thesis to my beloved parents.

[Signature]

[Date: 02/05/13]