ACKNOWLEDGEMENT

First and foremost, I am thankful to God, for his showers of blessings and for the good health and wellbeing that were necessary for me to complete my thesis work.

I express my deep and sincere gratitude to my research supervisor, Dr. Manoj Kumar Deka, for providing me an opportunity to work under his guidance. His scholarly guidance and inspiring suggestions have immensely helped me in every stage of my research work. This thesis would not have been possible without his sincere efforts and constant motivations. His discipline and dedication to research are great sources of inspiration for me. I am very much grateful for the opportunity to have worked in such a stimulating research environment created by him.

I am thankful to my Mom and Aappa for their love, support and encouragement that was always present for me in the moments when I was longing for the much needed motivation, to carry on with my work.

I am also thankful to the doctoral committee members of the Department of Computer Science & Technology, Bodoland University for their encouragement and valuable suggestions on my work. I am very grateful to them for insightful comments and constructive criticisms on the work to bring it to the current form.

A special thanks to Mr. Tapan Das, Mr. Biswajit Nath and Dr. Kishor Das for exploring the knowledge on embedded system and data analysis techniques respectively.

I am thankful to my friends Dr. Anirudha Deka, Mr. Hirakjyoti Sarma and Mr. Dibyajyoti Nath for their assistance in correcting my thesis. At times, when I was unable to figure out mistakes in my own written words, they were always there to provide me with different point of views that helped me correct my mistakes, for which I am very grateful.

I owe my gratitude to all the scientist of Tea Research Experiment station, Tocklai, Jorhart and Krishi Vigyan Kendra, Gossaigaon, for their valuable suggestions during my Ph.D. Research work. I also thankful to all tea gardeners of Kokrajhar district for their cooperation.

A special thanks to all my family and my brothers Nabin Pradhan, Amrit Newar, Aman Chetry and Gautam Chetry for all of the sacrifices that you've made on my behalf. Words cannot express how grateful I am to their prayer and support for me which sustained me this far.

Last but not the least, I am very much thankful to each and every member of Department of Computer Science and Technology, Bodoland University for their constant support and co-operation.

Yashu Pradhan