Acknowledgement

This research has become a reality due to the unconditional support of many individuals. I would like to express my gratitude to each one of them.

I would like to thank my research guide, Dr. Keerthana Prasad, Professor, Manipal School of Information Sciences (MSOIS), Manipal Academy of Higher Education (MAHE), Manipal, for her valuable guidance throughout the period of this research. Without her constant encouragement, support and guidance, this work would be impossible. I pledge my sincere gratitude for her unbounded patience, affection, guidance and keen care towards me.

I would like to convey my gratitude to the management of Nitte Education Trust and Dr. Niranjan N. Chiplunkar, Principal, NMAMIT, Nitte, for deputing me for Ph.D under Manipal Academy of Higher Education.

My heartfelt thanks to Prof. Ramashesha C. S., Director, MSOIS, MAHE, Manipal for allowing me to carry out the research in this institution and providing necessary infrastructure, materials and resources.

I would like to thank Dr. Harishchandra Hebbar, Chairman, Doctoral Advisory Committee, MSOIS, MAHE, Manipal for his support and encouragement throughout the research work.

I would like to express my gratitude to Doctoral Advisory Committee members, Dr. Niranjan U. C, Director, Manipal Dot Net, Dr. Somashekara Bhat, Professor, Department of Electronics and Communications Engineering, MIT, Manipal, Dr. Niranjana S, Associate Professor, Department of Biomedical Engineering, MIT, Manipal and Dr. B. Dinesh Rao, Professor, MSOIS, MAHE, Manipal for their valuable inputs during the research period.
I would like to thank Dr. Shyamala Guruvare, Professor and Unit-3 chief, Department of Obstetrics and Gynecology, Kasturba Medical College, MAHE, Manipal, for providing ground truth and the knowledge in medical domain. I would like to acknowledge the support of Dr. Suma Nair, Professor and HOD, Community Medicine Department, Kasturba Medical College, MAHE, Manipal for facilitating the acquisition of images during the screening programs conducted.

I would like to acknowledge the efforts of Ms. Shashiprabha and Ms. Pushpa of Community Medicine Department in arranging screening camps for facilitating data acquisition. Also, I acknowledge the support of all residents of Community Medicine Department, KMC, Manipal during data acquisition. My sincere thanks to Dr. Kiran Abhijit Kulkarni and Dr. Premalatha Siddartha, Department of Gynecologic Oncology, St. John’s Medical College, Bangalore, for providing the data.

I would like to thank Dr. Asha Kamath, Professor and Head, Department of Statistics, MAHE, Manipal for providing guidance in statistics related issues. I would like to thank National Cancer Institute, National Institute of Health, USA for providing dataset from their medical data repository.

I acknowledge the funding support provided by Consortium for Affordable Medical Technologies (CAMTech) at Massachusetts General Hospital by the generous support of the American people through the United States Agency for International Development (USAID).

I am grateful to Mr. Jayasheela, Junior Systems Executive, Central Computing Facility, MIT, MAHE, Manipal for providing the access to GPU facility. I would like to thank all teaching and non-teaching staff members of MSOIS, MAHE, Manipal for their support. My special thanks to Mr. Vidyanand and Mr. Praveen for their unconditional support.

I am very much obliged to Dr. K Rajesh Shetty, Department of ECE, NMAMIT, Nitte for formally accepting my request and taking it forward. I owe a lot of gratitude to him for his immense support. I am also grateful to Dr. Rekha Bhandarkar, HOD, Department of ECE, NMAMIT, Nitte for her kind support.

My special thanks to my mother for looking after my children during the
entire period of this research. This journey would not have been possible without the great support of my husband, my kids and all other family members. I would like to render my sincere sense of gratitude to all my family members.

Finally I am grateful to God for blessing me the strength and willpower to work through all these years.

VIDYA KUDVA