

## ACKNOWLEDGMENTS

---

कर्मण्येवाधिकारस्ते मा फलेषु कदाचन ।

मा कर्मफलहेतुर्भूर्मा ते संगोऽस्त्वकर्मणि ॥ श्रीमद् भगवद्गीता (2.47)

Six years ago, Lord Yogeshwar Shri Krishna inspired me to begin this journey and arranged the circumstances for it. Now, as I submit my Doctor of Philosophy thesis, I bow down at the feet of **Lord Yogeshwar Shri Krishna** and express my gratitude for His continuous inspiration and the strength He granted me to complete this course. I am also deeply thankful to **Rev. Pandurang Shashtri Athavale**, founder of Swadhyaya Pariwar, for motivating me to fulfil this journey alongside my other responsibilities.

I wish to express my gratitude to my friend and guide, **Dr. Vishwas Raval**, Associate professor, Central University of Gujarat, Vadodara (erstwhile Assistant Professor, CSE, Faculty of Technology & Engineering, The M S University of Baroda), for his continuous motivation, invaluable advice, and guidance. Just as Shamal Sheth accepted a promissory note from devotee Narsinh Mehta and helped him, Dr. Vishwas Raval has graciously accepted the role of guiding my work.

I would like to express my gratitude to **Dr. Apurva Shah**, Head of the department, CSE Department, Faculty of Technology & Engineering, and Director, Computer Centre, The Maharaja Sayajirao University of Baroda, Vadodara, for his unwavering support, motivation and guidance throughout the course. He is the person, who asked me to join PhD course under his guide ship till Dr. Vishwas Raval, get his guide ship letter. His calm and polite demeanor greatly helped me in completing the course.

My special thanks to **Dr. Anjali Jivani**, **Dr. Hetal Bhavsar** and **Dr. Viral Kapadia** for guidance and support. I also thank my colleague **Ms Khushi Popat** and **Ms. Barkha Joshi** for their support throughout the course.

I am deeply thankful to my parents, **Premilaben** and **Rameshachandra**, who have always inspired me to complete this course. I especially appreciate my mother, who had to leave her own graduation halfway but wanted to see me become a doctor. I am also grateful to my mother-in-law, **Chandrikaben**, for managing all household responsibilities during my thesis writing. My heartfelt thanks go to my great-grandfather-in-law, **Shri Kantibhai**, and my father-in-law, the late **Shri Vadilal**. I cannot forget the immense contribution of my beloved husband, **Dr. Himanshu Patel**, for his unwavering support and understanding,

and my sweet, caring daughters, **Jaladhi** and **Jayitri**, for their love and patience throughout this journey.

I am also grateful to my dear friends **Ami**, **Hetal** and **Hemani** for their moral support over these five years. I want to extend my thanks to **Prerna**, **Henil**, **Aayushi**, and **Vibhu** for their assistance with raw data creation. Additionally, I appreciate all my family members, friends, and students who contributed as speakers for the dataset.

I express my gratitude to all the professors of CSE department. I am also thankful to all staff members of CSE department.

This work would not have been possible without the research works carried out by other researchers and authors. I am thankful to all of them whose research work helped me to carry out this work.

Finally, I thank my other colleagues in the department whose support and guidance helped me to move ahead. I express my thankfulness to all who have directly indirectly helped me in this journey of PhD.

**-VIBHAVARI RAMESHCHANDRA PATEL**