

## Acknowledgement

**Almighty Allah** – the most beneficial and the merciful, the lord of infinite matter in the universe. I am thankful to my merciful lord “**Allah**” for his innumerable and gracious blessings on me during my whole life period. His countless blessings boosted and motivated me to write this Ph.D thesis. **Thank You O Allah.**

Besides this, I owe a sumptuous thanks to many people who helped, motivated and supported me during the writing of this Ph.D thesis. The credit of successful completion of this thesis depends largely on the encouragement and persuasion of my parents **Mr. Latief Ahmad Shah and Mrs. Shahida Parveen.** I would like to take this opportunity to express my sincere gratitude to the people who have been directly or indirectly involved in the successful completion of this doctorate thesis.

My heartiest and respectful thanks to my guide and mentor **Dr. Javed Parvez,** for guiding and believing in me throughout the Ph.D course. I acknowledge his efforts and patience for correcting my work with utmost attention and care. I am indebted to him for taking pains to go through this thesis and make necessary amendments as and when needed. - **Thank you Sir.**

I also acknowledge the support from teaching and non-teaching staff of Department of Computer Science, University of Kashmir and thank them for their immense support.

Throughout my unforgettable journey at the University, I was lucky enough to have wonderful colleagues and friends. I would like to thank them for sharing canteen with me for a cup of coffee and to listen to my arguments and correcting me with their critics and suggestions.

I would like to thank my friends **Heena Farooq** and **Asif Iqbal** for their valuable support. Thank You **Heena** for offering lunch and your wonderful recipes in the lab. Thank You **Asif** for listening to my idiotic ideas and talks and for correcting me with your taunting but valuable suggestions.

Last but not least, I would like to thank my brother **Irfan Ali Shah** without whose love, support and blessing, this thesis would have not been possible.

Junaid Latief Shah