Acknowledgements

I would like to gratefully acknowledge to many people for their support in this work. First, I wish to express sincere appreciation to my advisor, Dr. Tzu-Chieh Tsai, for his constant support. Without his help, this work would not be possible.

I would also like to thank Dr. Hung-Chin Jang, Dr. Cheng-Fu Chou, Dr. Hsiao-Kuang Wu, and Dr. Tsung-Nan Lin and for their invaluable advice and enriching my knowledge. I also like to thank all my teachers, lab members, classmates, and friends in Department of Computer Science at National ChengChi University. They provide spirit during my study.

Lastly, I would like to thank my family and my girl friend for their unconditional support. I dedicate this thesis to my mother and father.