LIST OF FIGURES

1.1 Types of Web Mining 01
1.2 Stages of Web Usage Mining 03
1.3 Block Diagram of Comprehensive Web User Usage Behavior System 10
1.4 Thesis Organization Chart 13
2.1 Road Map of Literature Survey 17
3.1 Intelligent Pre-Processing System of CWUUBS 40
3.2 Raw Weblog Data 44
3.3 Architecture of Intelligent Pre-Processing System 47
3.4 Sample IPPS-Tree 53
3.5 Example of Missing References 57
3.6 Error Rate between Testing and Training Data 60
3.7 Processing Performance of IPPS over i-Miner 61
4.1 Incremental Lattice Storage Model of CWUUBS 62
4.2 Architecture of Intelligent Lattice Storage Model 65
4.3 Sample Website Structure 66
4.4 Fundamental Lattice Structure of Usage Sequences 67
4.5 Extended Lattice Structure of Usage Sequences 67
4.6 Updated Lattice Structure of Usage Sequences after Processing Level 1 73
4.7 Updated Lattice Structure of Usage Sequences after Processing Level 2 74
4.8 Updated Lattice Structure of Usage Sequences after Processing Level 3 74
4.9 Performance of ILSM on Increased Size for Various Databases 76
4.10 Performance of ILSM on Decreased Size for Various Databases 76
4.11 Performance of ILSM on Increased Size for Various Minimum Supports 77
4.12 Performance of ILSM on Decreased Size for Various Minimum Supports 77
4.13 Performance of ILSM over MFTP 78
5.1 Advanced Pattern Discovery Model of CWUUBS 79
5.2 Architecture of Advanced Pattern Discovery Model 82
5.3 IFP-Tree on Reading Session 1 90
5.4 Updated IFP-Tree on Reading Session 2 90
5.5 Performance of IFP-Tree over MFTP 91
5.6 Comparison of IFP-Tree and MFTP 91
5.7 Performance of IFP-Tree on Increased Size for Various Databases 92
5.8 Performance of IFP-Tree on Decreased Size for Various Databases 92
5.9 Performance of IFP-Tree on Increased Size for Various Minimum Supports 93
5.10 Performance of IFP-Tree on Decreased Size for Various Minimum Supports 93
5.5 Updated IFP-Tree on Reading Session 3
5.6 Complete IFP-Tree on Reading All Sessions
5.7 Memory Comparison of IFP-Tree over Other Techniques
5.8 Efficiency Comparison of IFP-Tree over Other Techniques
6.1 Intelligent Optimal Genetic Model of CWUUBS
6.2 Architecture of Intelligent Optimal Genetic Model
6.3 Sample Sets of Visited Web Pages
6.4 Sample Binary Chromosome
6.5 Example of Stochastic Universal Selection
6.6 a) Sample Pair of Chromosomes
6.6 b) Single Point Crossover Operation before Crossover
6.6 c) Single Point Crossover Operation after Crossover
6.7 Process of bit-by-bit Mutation
6.8 Performance of IOGM over Standard Web Mining Technique
6.9 Performance of IOGM at different Crossover Probabilities
7.1 Analysis and Knowledge Representation System of CWUUBS
7.2 Architecture of Analysis and Knowledge Representation System
7.3 Set of Associated Patterns
7.4 Set of Key Properties of Objective Measures
7.5 Web Knowledge Tree (WK-Tree)
7.6 Accuracy Performance of Interest Factor
7.7 Rate of Actionability against Number of Beliefs
7.8 Rate of Unexpectedness Beliefs against Number of Beliefs
7.9 Learnability of Heuristic Factor
8.1 Framework of Case Study
8.2 IPPS Outcome with Decreased Size of Pre-Processing Weblogs
8.3 Storage Performance of ILSM
8.4 Categories Reduction through APDM
8.5 Comparison of Optimized Patterns with Associated Patterns
8.6 Performance of AKRS Measures
8.7 Usage Behavior of Web User 1
8.8 Usage Behavior of Web User 2 144
8.9 Usage Behavior of Ten Web Users 145
8.10 Top Web Users 146
8.11 Top Websites 146
8.12 Top Web Categories 147
8.13 Web Usage Trend in a Day 147