<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>The I-Tree structure</td>
<td>22</td>
</tr>
<tr>
<td>4.2</td>
<td>The I-Tree constructed from Table 4.2 in the first stage of Lin's method</td>
<td>25</td>
</tr>
<tr>
<td>4.3</td>
<td>The I-Tree in Figure 4.2 after it is processed by the PT algorithm in the second stage of Lin's method</td>
<td>26</td>
</tr>
<tr>
<td>4.4</td>
<td>$l_{max} = 800$, $m = 500$, $minsup = 0.05$</td>
<td>67</td>
</tr>
<tr>
<td>4.5</td>
<td>$l_{max} = 850$, $m = 450$, $minsup = 0.1$</td>
<td>68</td>
</tr>
<tr>
<td>4.6</td>
<td>$l_{max} = 900$, $m = 400$, $minsup = 0.05$</td>
<td>69</td>
</tr>
<tr>
<td>4.7</td>
<td>$l_{max} = 800$, $n = 200K$, $minsup = 0.05$</td>
<td>71</td>
</tr>
<tr>
<td>4.8</td>
<td>$l_{max} = 850$, $n = 300K$, $minsup = 0.1$</td>
<td>72</td>
</tr>
<tr>
<td>4.9</td>
<td>$l_{max} = 900$, $n = 400K$, $minsup = 0.1$</td>
<td>73</td>
</tr>
<tr>
<td>4.10</td>
<td>$l_{max} = 800$, $n = 200K$, $m = 400$</td>
<td>75</td>
</tr>
<tr>
<td>4.11</td>
<td>$l_{max} = 850$, $n = 300K$, $m = 450$</td>
<td>76</td>
</tr>
<tr>
<td>4.12</td>
<td>$l_{max} = 900$, $n = 400K$, $m = 500$</td>
<td>77</td>
</tr>
<tr>
<td>4.13</td>
<td>$n = 200K$, $m = 400$, $minsup = 0.05$</td>
<td>79</td>
</tr>
<tr>
<td>4.14</td>
<td>$n = 300K$, $m = 450$, $minsup = 0.1$</td>
<td>80</td>
</tr>
<tr>
<td>4.15</td>
<td>$n = 400K$, $m = 500$, $minsup = 0.05$</td>
<td>81</td>
</tr>
<tr>
<td>4.16</td>
<td>Growth of total computational time of the Chk_Freq algorithm with $</td>
<td>M(k, TK1)</td>
</tr>
<tr>
<td>5.1</td>
<td>The IS-Tree structure</td>
<td>100</td>
</tr>
</tbody>
</table>
Figure 5.2  The IS-Tree when the CMiner algorithm terminates for the data in Table 5.2............................................105

Figure 5.3  The IR-Tree structure.......................................................................113

Figure 5.4  The IS-Tree obtained after the CMiner algorithm is executed on the data in Table 5.2 for k=1............................................................................118

Figure 5.5  The IR-Tree obtained after Step 1(b) of the Organize algorithm for the IS-Tree in Figure 5.4. The $m_{ij}$ fields are not shown....................................119

Figure 5.6  The IR-Tree obtained after termination of the Organize algorithm for the IS-Tree in Figure 5.4...........................................................................................119

Figure 5.7  $l_{\text{max}} = 800$, $m = 500$, $\text{minsup} = 0.1$..................................................................................125

Figure 5.8  $l_{\text{max}} = 850$, $m = 450$, $\text{minsup} = 0.1$..................................................................................126

Figure 5.9  $l_{\text{max}} = 900$, $m = 400$, $\text{minsup} = 0.05$..................................................................................126

Figure 5.10  $n = 1K$, $l_{\text{max}} = 800$, $\text{minsup} = 0.05$..................................................................................127

Figure 5.11  $n = 2K$, $l_{\text{max}} = 850$, $\text{minsup} = 0.1$..................................................................................128

Figure 5.12  $n = 3K$, $l_{\text{max}} = 900$, $\text{minsup} = 0.05$..................................................................................128

Figure 5.13  $n = 1K$, $l_{\text{max}} = 800$, $m = 400$..................................................................................129

Figure 5.14  $n = 2K$, $l_{\text{max}} = 850$, $m = 450$..................................................................................130

Figure 5.15  $n = 3K$, $l_{\text{max}} = 900$, $m = 500$..................................................................................130

Figure 5.16  $n = 1K$, $m = 400$, $\text{minsup} = 0.05$..................................................................................131

Figure 5.17  $n = 2K$, $m = 450$, $\text{minsup} = 0.1$..................................................................................132

Figure 5.18  $n = 3K$, $m = 500$, $\text{minsup} = 0.05$..................................................................................132

Figure 5.19  Growth of total computational time of the CloSup algorithm with the number of closed intervals in an interval transaction database........................................134
Figure 6.1 Characteristics of a local maximum of the certainty function in CSTD.............................................................156

Figure 6.2 Detection of the start of a local maximum (Step 2(a) of the LocMax algorithm)...........................................160

Figure 6.3 Detection of the end of the peak of a local maximum (Step 2(b) of the LocMax algorithm)........................161

Figure A.1 A warping path $W = (w_1, w_2, w_3, \ldots, w_p)$..................................197