Corrections and additional notes

W. Hämäläinen

November 10, 2015

p. 14 (Section 1.4) paper W. Hämäläinen: “Efficient discovery of the top-K optimal dependency rules with Fisher’s exact test of significance” was published in the Proceedings of the 10th IEEE International Conference on Data Mining (ICDM 2010), pp. 196-205.

p. 33 The paragraph after equations. “The idea is that when \(N_{XA} \geq m(XA)\), then \(\frac{N_{XA}}{m(X)} \geq P(A|X)\), and if we already had \(P(A|X) > P(A)\), then also \(G \geq \gamma\).” should be “The idea is that when \(N_{XA} \geq m(XA)\), then \(\frac{N_{XA}}{m(X)} \geq P(A|X)\), and since \(p_A = P(A)\) was fixed, then also \(G \geq \gamma\).”

p. 43 (Section 2.4), the last paragraph. “where \(\rho > 1\) indicates a non-redundant rule, and larger \(\rho\) values could be used” should be either “where \(\rho < 1\) indicates a non-redundant rule, and smaller \(\rho\) values could be used” or \(\rho\) should be defined as ratio \(\rho = \frac{p(X \rightarrow A=a)}{p(XQ \rightarrow A=a)}\).

p. 61 (Section 3.2), proof of Observation 3.7, line 5 “\(\leq f(m(B = b), m(B = b) m(B = b), n)\)” should be “\(\leq f(m(XA), m(XA), m(XA), n)\)”. The referred Theorem and the explanation are correct.

p. 66 (Section 3.3), factorial sign “!” is missing in the end of the third line, “\(\geq \frac{(n-m(XA))!}{m(\neg X)!}\)”.

p. 79 (Section 4.3), Algorithm 5, lines 13 and 14, \(s\) should be \(v\), i.e. line 13 should be “\(v.ppossible[j] \leftarrow possible(A_j, 1, v, A_i)\)” (and line 14 similarly for \(n.ppossible\)).

p. 82 (Section 4.3), Algorithm 8, function \texttt{updatetables}, in the last line “\(s.nbest[i] \leftarrow \max\{n.pbest[i], s.nbest[i]\}\)” should be “\(s.nbest[i] \leftarrow \max\{v.nbest[i], s.nbest[i]\}\)”.

p. 96 (Section 5.1.4) the last line mentions that just 2 GB memory is sufficient. Actually, it was 1 GB memory and 1 GB swap, and it would be more correct to say that 1 GB memory is sufficient.

p. 123 (Appendix B.1) Theorem B.1 the sum equation: \(i=2\) should be \(i=1\) (in the text it was correctly).
If you find any other errors (not typos, but errors which could change the meaning), please inform the author!