Συστήματα Ανακάλυψης Γνώσης από Βάσεις Δεδομένων

Εργασία 2 – Data Reduction, Clustering

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(A)

1.

TS = {A,B,C,D,E,F,G,H,I,J,K}

ES = {A,B,C,D,E,F,G,H,I,J,K}

A	BFD	ES = {B,C,D,E,F,G,H,I,J,K}
B	ACD	ES = { C,D,E,F,G,H,I,J,K}
C	BEI	ES = {D,E,F,G,H,I,J,K}
D	GFH	ES = {D,E,F,G,H,I,J,K}
E	HDI	ES = {D,F,G,H,I,J,K}
F	GJD	ES = {D,F,G,H,I,J,K}
G	FDH	ES = {D,F,G,H,I,J,K}
H	EDG	ES = {D,F,G,H,I,J,K}
I	EHD	ES = {D,F,G,H,J,K}
J	FGK	ES = {D,F,G,H,K}
K	JDG	ES = {D,F,G,H,K}

2.

TS = {A,B,C,D,E,F,G,H,I,J,K}

CS = {}

K CS = {K} TS = {A,B,C,D,E,F,G,H,I,J}

J CS = {K,J} TS = {A,B,C,D,E,F,G,H,I}

I CS = {I,J,K} TS = {A,B,C,D,E,F,G,H}

H CS = {H,I,J,K} TS = {A,B,C,D,E,F,G}

G CS = {H,I,J,K} TS = {A,B,C,D,E,F,G}

F CS = {F,H,I,J,K} TS = {A,B,C,D,E,G}

E CS = {E,F,H,I,J,K} TS = {A,B,C,D,G}

D CS = {E,F,H,I,J,K} TS = {A,B,C,D,G}

C CS = {C,E,F,H,I,J,K} TS = {A,B,D,G}

B CS = {B,C,E,F,H,I,J,K} TS = {A,D,G}

A CS = {B,C,E,F,H,I,J,K} TS = {A,D,G}

G CS = {B,C,E,F,H,I,J,K} TS = {A,D,G}

D CS = {B,C,D,E,F,H,I,J,K} TS = {A,G}

A CS = { B,C,D,E,F,H,I,J,K} TS = {A,G}

3.

Βλέπουμε τους 3 κοντινότερους γείτονες στο κάθε data set στο σημείο (6,7) έτσι όπως προέκυψαν από τα παραπάνω και βγάζουμε τα εξής συμπεράσματα:

TS = ΆΣΠΡΟ

ES = ΜΑΥΡΟ

CS = ΑΣΠΡΟ

(B)

1.

BHMA 4:

a(0) bc(4,5) d(8) e(12) f(14) ghi(16,17,18) j(20)

BHMA 5:

a(0) bc(4,5) d(8) ef(12,14) ghi(16,17,18) j(20)

BHMA 6:

a(0) bc(4,5) d(8) efghi(12,14,16,17,18) j(20)

BHMA 7:

a(0) bc(4,5) d(8) efghij(12,14,16,17,18,20)

BHMA 8:

a(0) bcd(4,5,8) efghij(12,14,16,17,18,20)

BHMA 9:

abcd(0,4,5,8) efghij(12,14,16,17,18,20)

BHMA 10:

abcdefghij(0,4,5,8,12,14,16,17,18,20)

2.

BHMA 1:

a(0) b(4) c(5) d(8) e(12) f(14) g(16) h(17) i(18) j(20)

BHMA 2:

ab(0,4) c(5) d(8) e(12) f(14) g(16) h(17) i(18) j(20)

BHMA 3:

ab(0,4) c(5) de(8,12) f(14) g(16) h(17) i(18) j(20)

BHMA 4:

ab(0,4) cde(5,8,12) f(14) g(16) h(17) i(18) j(20)

BHMA 5:

ab(0,4) cdef(5,8,12,14) g(16) h(17) i(18) j(20)

BHMA 6:

ab(0,4) cdefg(5,8,12,14,16) h(17) i(18) j(20)

BHMA 7:

ab(0,4) cdefg(5,8,12,14,16) h(17) ij(18,20)

BHMA 8:

abcdefg(0,4,5,8,12,14,16) h(17) ij(18,20)

BHMA 9:

abcdefgh(0,4,5,8,12,14,16,17) ij(18,20)

BHMA 10:

abcdefghij(0,4,5,8,12,14,16,17,18,20)

3.

BHMA 3: C1 centroid = 5,8 C2 centroid = 16,25 C3 centroid = 20

Ανάθεση Σημείων: C1(abcd), C2(efghi), C3(j)

BHMA 4: C1 centroid = 4,25 C2 centroid = 15,4 C3 centroid = 20

Ανάθεση Σημείων: C1(abcd), C2(efgh), C3(ij)

BHMA 5: C1 centroid = 4,25 C2 centroid = 14,75 C3 centroid = 19

Ανάθεση Σημείων: C1(abcd), C2(efg), C3(hij)

BHMA 6: C1 centroid = 4,25 C2 centroid = 14 C3 centroid = 18,33

Ανάθεση Σημείων: C1(abcd), C2(efg), C3(hij)