IMPLEMENTASI ALGORITMA *FP – GROWTH* DAN *ASSOCIOTION RULE* PADA PEMILIHAN BIDANG MINAT PROGRAM STUDI TEKNIK INFORMATIKA

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Abstrak

Association rule mining adalah sebuah teknik data mining untuk menemukan assosiasi yang sesuai atau hubungan antar data dari sejumlah besar data. Sejumlah besar data yang diproses, dapat ditemukan *rule – rule* nya dengan menggunakan algoritma FP – *Growth* dengan dua proses yaitu pencarian frequent itemset berdasarkan minimum support dan pembentukan *rule* berdasarkan minimum confidece.

Dalam tugas akhir ini, akan membuat sistem pencarian pola assosiasi konsentrasi bidang minat program studi terhadap data akademik alumni dengan menggunakan *Association Rule* dan Algoritma *FP – Growth* yang dimana metode ini dapat menemukan pola asosiasi. Pada saat ini, kaprodi Teknik Informatika Univeristas Muhammadiyah Jember masih belum menemukan pola asosiasi untuk membantu menentukan bidang minat.

Setalah melakukan perhitungan kombinasi IPK kita dapat melihat perbadingan, yang diamana bidang minat sebelumnya dan sEtelah melakukan perhitungan itu terdapat perbedaan, dimisalkan dengan nim 0910651001 minat awalnya adalah KBJ dan setelah melakaukan perhitungan kombinasi IPK mahasiswa tersebut ternyata masuk pada bidang minat SBC. Setelah kita melihat pada Grafik Minat pengelompokan bidang Minat Mahasiswa berdasarkan Hasil Akhir yang di peroleh pada Perhitungan *FP – Growth,* dimana RPL − 3 = 2, KBJ − 2 = 8, SBC − 2 = 2 dan KBJ − 3 = 4.

Kata kunci : Algoritma *Fp – growth*, *association rule*, *Fp – Tree*, Data mining

IMPPLEMENTASI Algorithm *FP - GROWTH* AND *ASSOCIOTION RULE* ON THE ELECTION OF THE INTERESTS OF ENGINEERING STUDY INFORMATION

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Abstrak

At this time, a student in the Department of Information Engineering University of Muhammadiyah Jember not have a system to help students determine their areas of interest. Selection of areas of interest is very necessary because it is related to decision-Final of the students themselves. The system will be built based on the analysis of some data - previous data. Algorithm FP - Growth is one of the alternative algorithm that can be used to specify the data set that appears most frequently (frequent itemset) in a set of data. Algorithm FP - Growth generate candidate was not done because of FP - Growth uses the concept of development in the search for frequent itemset tree.

From the above explanation is expected by the model of decision support system that is owned by the Department can help to determine the pattern of historical value in determining the course that will be offered optional subjects by applying data mining techniques using Association Rule and algorithm FP - Growth.

After calculating the GPA combinations we can see a comparison, in which areas of interest before and after doing calculations that there are differences, exemplified by nim 0910651001 initial interest was KBJ and after calculating the combined GPA of the student turns in on areas of interest SBC. Once we see in Chart Interests Interests field grouping students based Outcomes obtained in the calculation of FP - Growth, where RPL - 3 = 2, KBJ - 2 = 8 SBC - 2 = 2 and KBJ - 3 = 4.

Keywords: Algorithm *Fp - growth*, *association rule*, *fp - Tree*,