Determining The Senior High School Major of Students SMPN 2 Purwodadi Using Agglomerative Hierarchial Clustering Algorithm

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ABSTRAK

Selection of majors by the students according to interests when enrolling in high school has the aim to provide opportunities for students to develop competence attitudes and competence skills of students according with their interests, talents, and academic skills in a group of subjects in science. Determination of the majors will affect the next academic level and will affect the field of science or studies for students who will continue on to the university level so that the selection of incorrect majors could harm students and their future. Clustering is one known technique in data mining, core understanding of clustering in data mining is a grouping of data or number of objects into groups so that each of the clustering will contain the data that is as similar as possible and the object different from other clusters. There are two methods of clustering that we know which is hierarchical clustering and partitioning. Hierarchical clustering method consists of a complete linkage clustering, single linkage clustering, average linkage clustering and centroid linkage clustering. While the method of partitioning itself consists of k-means clustering and k-means clustering fuzy. Methods will be tried hierarchy applied in this study is the fifth hierarchical clustering method previously mentioned. This method will be compared five weeks to see what works cluster grouping is expected to be known to the similarity or proximity between data that can be grouped into clusters, where among the cluster members have a high level of similarity. This study will analyze the application of hiearachial clustering techniques for grouping students of SMP Negeri 2 Purwodadi in choosing majors when will enroll in senior high school. In this research, the implementation of Agglomerative Hierarchial Clustering for classification prediction to selecting the major in senior high school get the fair result. From this research result, system prototyping is developed for the visualization that can help student to determine major in senior high school.

Kata Kunci   :   Keyword: Data Mining, Classification, Agglomerative Hierarchial Clustering Algorithm, Major Determination in Senior High School

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ABSTRACT

Selection of majors by the students according to interests when enrolling in high school has the aim to provide opportunities for students to develop competence attitudes and competence skills of students according with their interests, talents, and academic skills in a group of subjects in science. Determination of the majors will affect the next academic level and will affect the field of science or studies for students who will continue on to the university level so that the selection of incorrect majors could harm students and their future. Clustering is one known technique in data mining, core understanding of clustering in data mining is a grouping of data or number of objects into groups so that each of the clustering will contain the data that is as similar as possible and the object different from other clusters. There are two methods of clustering that we know which is hierarchical clustering and partitioning. Hierarchical clustering method consists of a complete linkage clustering, single linkage clustering, average linkage clustering and centroid linkage clustering. While the method of partitioning itself consists of k-means clustering and k-means clustering fuzy. Methods will be tried hierarchy applied in this study is the fifth hierarchical clustering method previously mentioned. This method will be compared five weeks to see what works cluster grouping is expected to be known to the similarity or proximity between data that can be grouped into clusters, where among the cluster members have a high level of similarity. This study will analyze the application of hiearachial clustering techniques for grouping students of SMP Negeri 2 Purwodadi in choosing majors when will enroll in senior high school. In this research, the implementation of Agglomerative Hierarchial Clustering for classification prediction to selecting the major in senior high school get the fair result. From this research result, system prototyping is developed for the visualization that can help student to determine major in senior high school.

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