

Data Mining Projects Ideas

❖ Criteria of Data Mining Project:

- 1- Get dataset (2 points)
- 2- Data Preprocessing (3 points)
- 3- Implemented data mining algorithms (6 points)
- 4- Data visualization (2 points)
- 5- Question will be asked for each member (5 points)
- 6- Show the project on the orange tool. (2 points)

- 1) Using the programming language Python, implement three frequent itemset mining algorithms: (1) Apriori, (2) FP-growth, and (3) Eclat (mining using the vertical data format). Compare the performance of each algorithm with various kinds of large data sets. Write a report to analyze the situations (e.g., data size, data distribution, minimal support threshold setting, and applications) where one algorithm may perform better than the others, and state why.
- 2) Diabetes is one of the most common and hazardous diseases on the planet. It requires a lot of care and proper medication to keep the disease in control. This project teaches you to develop a classification system to detect whether the patient has diabetes or not. Diabetes prediction using classification algorithms.
- 3) House price prediction, you will utilize data science techniques like machine learning to predict the house price at a particular location. This project finds applications in real estate industries to

predict house prices based on the previous data for example the location and size of the house and facilities near the house.

- 4) Detecting fraudulent transactions is a very significant use case in today's scenario of digitized monetary transactions. The data contains transaction details like transaction type, amount of transaction, customer initiating the transaction, old and new balance in Origin i.e., before and after transaction respectively and same as in Destination Account along with the target label, is fraud. So, based on the transaction details, a Classification Model can be developed that can detect fraudulent transactions.
- 5) Loan approval prediction. Generally, it involves the lender looking at various background information about the applicant, and deciding whether the bank should grant the loan. Parameters like credit score, loan amount, **lifestyle**, **career**, and assets are the deciding factors in getting the loan approved. If, in the past, people with parameters similar to yours have paid their dues timely, it is more likely that your loan would be granted as well.