**Title of the Project: Banking Customer and Loan Prediction System**

**Introduction:**

Banking Customer and Loan Prediction System is a system that can be used by bank employee to verify with the previous loan applicants data and whether the application was approved or not for the current customer. In this project , we will build a machine learning model to predict the loan approval probability.

**Objective:**

Following are the steps involved in creating a well-defined ML project:

* Understand and define the problem
* Analyse and prepare the data
* Apply the algorithms
* Reduce the errors
* Predict the result

**Predict if the loan application will get approved:**

We have the dataset for loan application information like the applicant's name, personal details, financial information and requested loan amount and related details and the outcome (whether the application was approved or rejected). Based on this we are going to train a model and predict if a loan will get approved or not.

**Machine Learning Methods:**

* **Decision Trees:**

The basic algorithm of decision tree requires all attributes or features should be discretized. Feature selection is based on greatest information gain of features. The knowledge depicted in decision tree can represented in the form of IF-THEN rules.

* **Neural Network (Nnet):**

Neural networks are non-linear statistical data modeling tools. They are usually used to model complex relationships between inputs and outputs, to find patterns in data, or to capture the statistical structure in an unknown joint probability distribution between observed variables.

**Technologies And Tools:**

**Software Used:**

* Languages: Python
* IDE: Anaconda(Jupyter notebook)
* Libraries: Pandas, Scikit-learn, Matplotlib, Numpy
* Flask(Deploy the model in web)
* Operating System: - Windows XP - Windows 7 - Windows 8 Or any other version.

**Hardware Used:**

* Processor: i5 9th Gen
* RAM: 8 GB
* Graphics: 4GB

**Conclusion:**

From a proper analysis of positive points and constraints on the component, it can be safely concluded that the product is a highly efficient component. There have been numbers cases of computer glitches, errors in content and most important weight of features is fixed in automated prediction system, So in the near future the so –called software could be made more secure, reliable and dynamic weight adjustment .In near future this module of prediction can be integrate with the module of automated processing system. the system is trained on old training dataset in future software can be made such that new testing date should also take part in training data after some fix time.

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