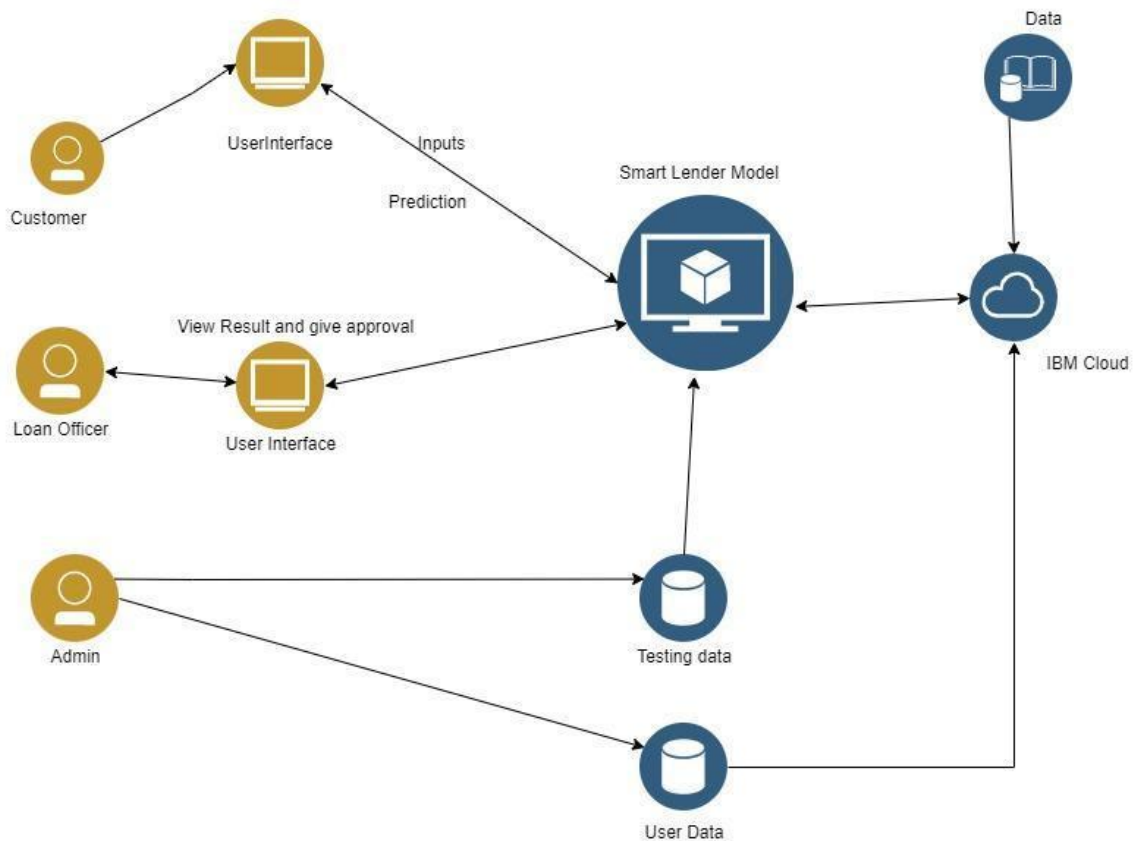


# Smart Lender - Applicant Credibility Prediction for Loan Approval

## Technology Architecture

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### Architecture Diagram:



**Components & Technologies:**

S. No.	Component	Description	Technology
1.	User Interface	Customer, Admin and Loan Approval Officers will be able to register login and use the functionalities available to them.	HTML
2.	Data Collection	User gives input to the model to check the prediction.	Python
3.	Approval	The loan officer can check the results produced from the model and can either accept or reject the loan.	Python, Watson Studio
4.	Testing data	Data that is used to test the model .	Python
5.	User data	Data that is provided to the user.	Test data
6.	Data	Data used to train the model.	Train data
7.	Smart Lender Model	Performs automated loan approval decision and gives details supporting decision.	Javascript, Python
8.	Machine Learning model	Automated decision making for loan approval and giving details for decision.	Decision tree, Random forest, KNN, xgboost.
9.	Infrastructure (Server/Cloud)	Default	Flask

**Application Characteristics:**

S. No.	Component	Description	Technology
1.	Model Analysis	Predictive modeling is commonly used as a statistical technique to predict future behavior.	Regression
2.	Availability	Decentralized storage and distribution along-with web application approach make the service highly available.	IBM Cloud
3.	Train & Test split of data	The train-test split is used to estimate the performance of machine learning algorithms that are applicable for prediction-based Algorithms or Applications. This method is a fast and easy procedure to perform such that we can compare our own machine learning model results to machine results.	Dataset
4.	Scalable Architecture	Since the application servers can be deployed on many machines. Also, the database does not make longer connections with every client – it only requires connections from a smaller number of application servers. It improves data integrity.	3-tier architecture