Loan Approval Prediction

For financial companies, it is of utmost importance to check their customers for eligibility to loan. In order to speed up the decision making process utilization of machine learning models is much needed.

In this task, you are given a dataset consisting of clients' financial data and whether their loan is approved or not. Using this data first train a model to predict prospective clients' eligibility for a loan and then create a REST API (e.g. using Python and Flask) to serve your model to be used in production environment.

Task 1

You are expected to train and evaluate a machine learning algorithm to predict loan status of our clients. In the end, you are expected to provide a classification report that summarizes the performance of your model

Deliverables

1. A Jupyter notebook (.ipynb) that clearly shows the data analysis, feature engineering, model training and evaluation steps. Please provide your final notebook with all the notebook cells showing output.
2. Dump of the final model you obtained (e.g. Pickle or Joblib) to be used for deployment.

Task 2

After training and evaluating the model, it is time for deploying it on a production server. In this phase of the task, you are expected to develop a service (e.g. using Python and Flask) that exposes REST endpoints. The main responsibility of this service is, given a client's data it would return the prediction result of the model you have trained in the first task. Using Docker to package your application is needed to deploy on production. The code should be clean, easy to read and service should be well structured. It is a plus if it includes basic logging and exception handling.

Deliverables

1. A Python application that includes model dump, Dockerfile and "requirements.txt" files as well as a "README.md" file.

All the work should be commited to Github repository and the repository link should be provided.