

NAME : R.MARIA BENO VENGHER  
COLLEGE CODE : 9530  
COLLEGE NAME : ST.MOTHER THERESA ENGINEERING COLLEGE  
NAAN MUDHALVAN ID : au953021104026  
PROJECT NAME : MACHINE LEARNING MODEL DEPLOYMENT WITH IBM  
WATSON STUDIO

### **PROBLEM SOLUTION:**

**1.NETWORK ISSUE-** there might be network restrictions preventing our model from communicating with external services

**SOLUTION-** ensure that the necessary network configuration are in place, such as firewalls and VPN settings

**2.INCORRECT MODEL FORMAT-**The model we are trying to deploy might not be in a supported format

**SOLUTION-**check if the model is saved in a compatible format like tensor flow, pytorch, onnx etc. if not, you might need to retrain and save it in supported form.

**3. ENVIRONMENT CAPABILITY-** Ensuring that the deployment environment in Watson Studio is compatible with your model and its dependencies can be challenging.

**SOLUTION-** Thoroughly document the dependencies and versions used during model development. Create a custom runtime environment or Docker container with the required dependencies if necessary.

**4.RESOURCE CONSTRAINTS-** Limited computational resources or restrictions on CPU/GPU usage can affect the performance of your deployed model.

**SOLUTION -** Monitor resource usage, optimize your model for efficiency, and consider scaling up resources if needed. IBM Cloud provides options for scaling resources.

**5.DATA DRIFT AND MODEL DECAY -**Over time, data used for training and the real-world data distribution may change, leading to a decrease in model performance.

**SOLUTION-** Implement regular model retraining and monitoring. Set up automated pipelines to retrain the model with new data and evaluate its performance.

## METHODOLOGY:





