TENDER PRICE OPTIMIZATION

(1) BUSINESS & DATA UNDERSTANDING

- Data collection
- Frame Sampling
- Annotation
- Exported TF Obj Detection CSV & IMAGE

DATA COLLECTION

S3

(2) DATA PREPROCESSING

20% 20% 20% 60%

Train Test Split

- Data Scaling and Normalization
- Encoding Categorical Variables
- Handling Categorical Data
- Dealing with Outliers
- AutoEDA libraries
- Handling Missing Data
- Feature Selection

Image resizing

Normalization

Image Augmentation

S3

- Regularization
- Hyperparameter Tuning
- Train-Test Split
- Hyperparameter Tuning
- Regularization Techniques
- Cross-Validation
- Evaluation Metrics

adjust_learning_rate
increase_training_data
increase_model_complexity
increase_epochs
shuffling_the_data
reduce_regularization

batch_normalization   shuffling_inputs
dropouts
early_stopping
adding_noise
data_aug   drop_connect
weight_decay

Underfitting techniques   Regularization

Yes   Yes

Rightfit   Underfit   Overfit

No   No

Model Evaluation

(4) EVALUATION

(3) MODEL BUILDING

- Supervised Learning-Regression
- Forecasting
- Train-Test Split
- Ensemble Techniques

Edge Deployment

Flask → EC2

Streamlit

(5) DEPLOYMENT

Users

Power BI

Inferences

Report

Inferences

S3

(6) MONITORING & MAINTENANCE