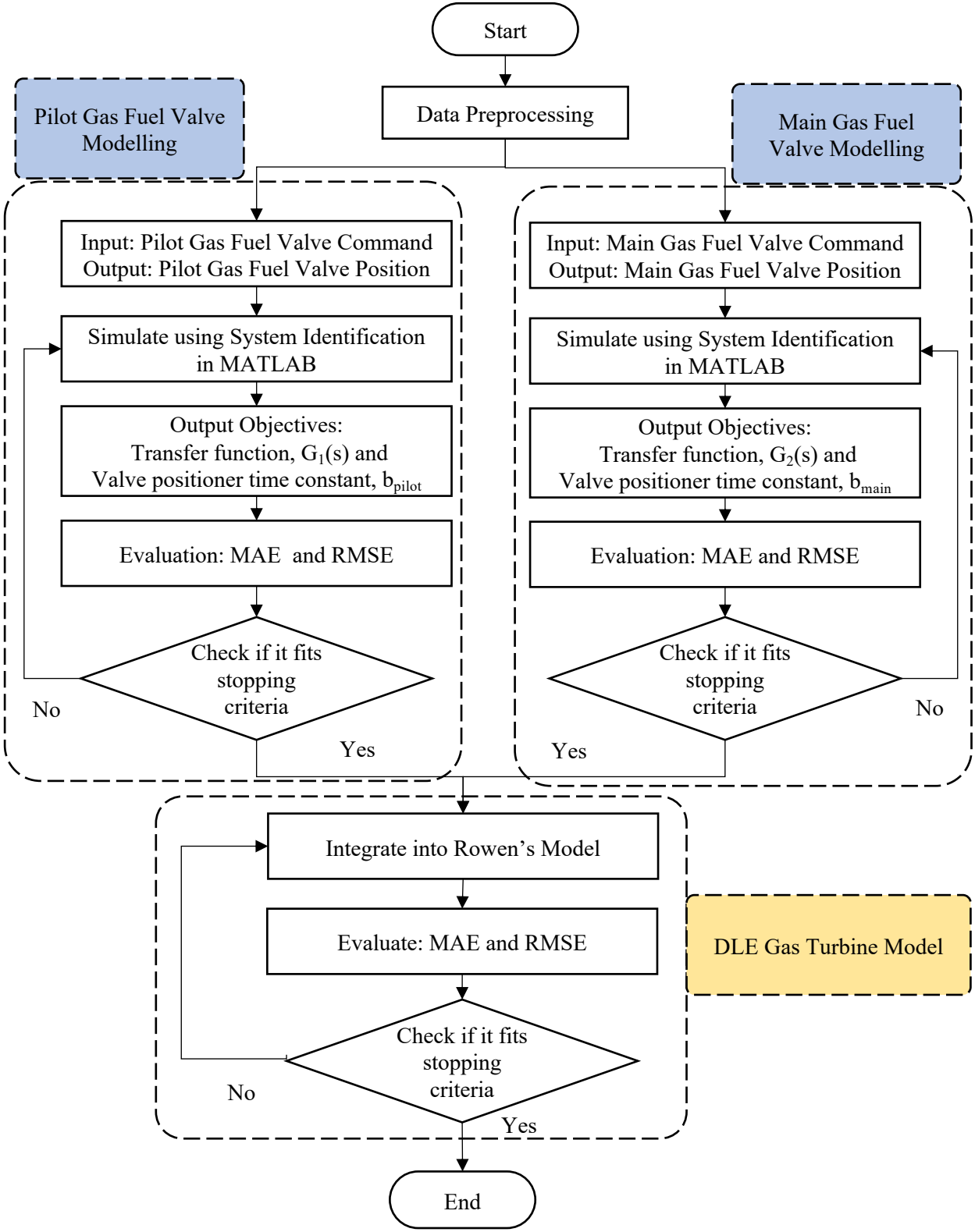
Start
Data Preprocessing
Pilot Gas Fuel Valve Modelling
Main Gas Fuel Valve Modelling
Input: Pilot Gas Fuel Valve Command
Output: Pilot Gas Fuel Valve Position
Simulate using System Identification in MATLAB
Output Objectives:
Transfer function, $G_1(s)$ and
Valve positioner time constant, b_{pilot}
Evaluation: MAE and RMSE
Check if it fits stopping criteria
No
Yes
Input: Main Gas Fuel Valve Command
Output: Main Gas Fuel Valve Position
Simulate using System Identification in MATLAB
Output Objectives:
Transfer function, $G_2(s)$ and
Valve positioner time constant, b_{main}
Evaluation: MAE and RMSE
Check if it fits stopping criteria
No
Yes
Integrate into Rowen's Model
Evaluate: MAE and RMSE
Check if it fits stopping criteria
No
Yes
DLE Gas Turbine Model
End