

Project Title:

Data-Driven Prediction of Temperature in CFD Simulations Using Ensemble Models.

Week 7 (Mar 21 – Mar 27, 2025)

Tasks Completed:

- Conducted hyper parameter tuning using Randomized Search.
- Evaluated regression model performance on test data using MAE, RMSE, and R^2 .
- Compared regression results against previously used ensemble models (Random Forest, XGBoost).

Observations:

- Regression captured temporal temperature trends better at higher time steps.
- Slightly lower accuracy than Random Forest in terms of MAE, but improved smoothness in predictions.