**X/HEC TIME SERIES 2024 - Practical Session Report Template**

**Group Members:**

(Please list the names of all group members here)

**Data Preprocessing (2 points)**

(Describe the preprocessing steps taken to prepare the dataset for the analysis. Include any feature engineering, normalization, or data transformation steps, and external data added to the

**Model Architecture and Training (4 points)**

(Describe the models you developed to predict the air pollutant levels. For each model, include (if applicable): type of model, model architecture, hyperparameters, training process (loss function, optimizer, regularization), validation strategy.

**Results and Comparison (5 points)**

* **Model Performance** :
  + (Provide a summary of each model's performance. Include metrics of your choice.)
* **Comparison**:
  + (Compare the performance of the different models. Discuss which models performed the best and why. Analyze their strengths and weaknesses in the context of the time series data you worked with.)

**Discussion (3 points)**

(Reflect on the learning experience from the practical session. Discuss any challenges faced while implementing the models and how you overcame them. Mention any insights gained about deep learning techniques in time series analysis and how they compare with classical ML.)

**Conclusion (1 points)**

(Summarize the key findings from your practical session. Reflect on the effectiveness of deep learning models in time series analysis and any potential future work or improvements that could be made.)

**Kaggle Challenge (5 points – Depending on the score of your best model**

**+ 1 Bonus point for the best team)**

Link to Kaggle Challenge : <https://www.kaggle.com/t/f67e04bba03e4f0b94fb26b2b154884a>

**Note to Students**: Keep your report concise and focused. The total length should not exceed **4 pages**.

**Submission Deadline**: [TBD]

Please submit the report in a PDF format to [charles.boy-de-la-tour@capgemini.com].