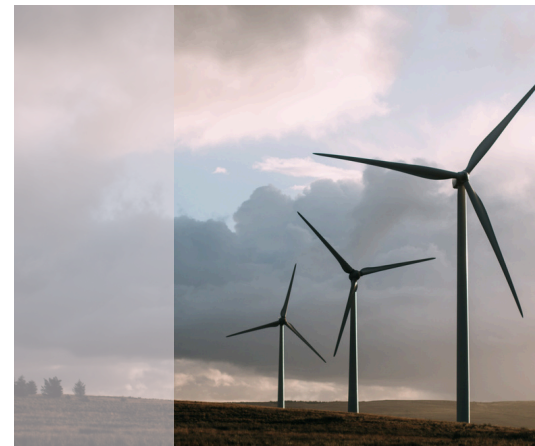


PROJECT

Wind power generation

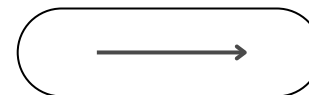
DATE

2025/7/31



# PROJECT REPORT

Using ST-GCN technology to supplement the meteorological data of power plants

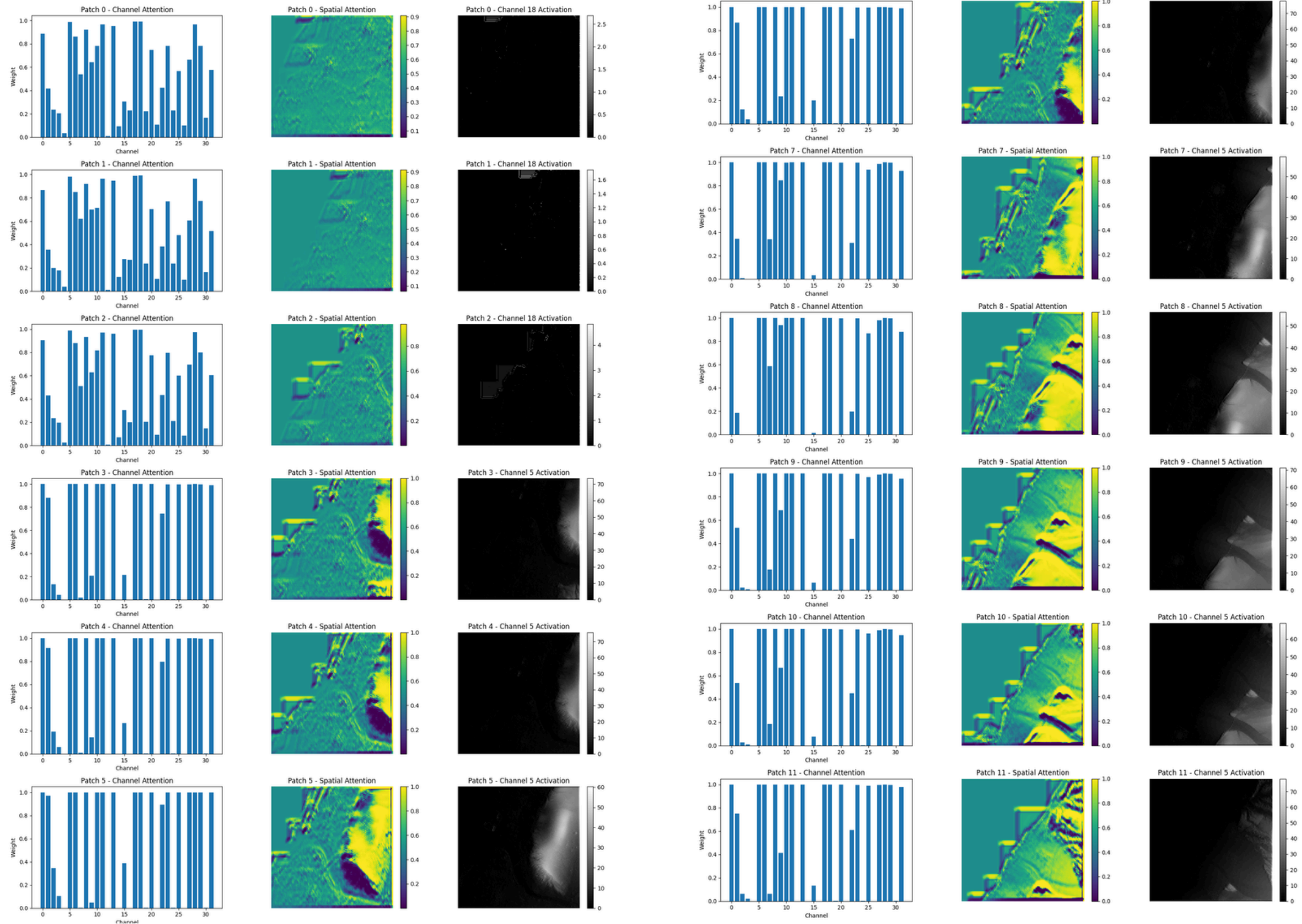


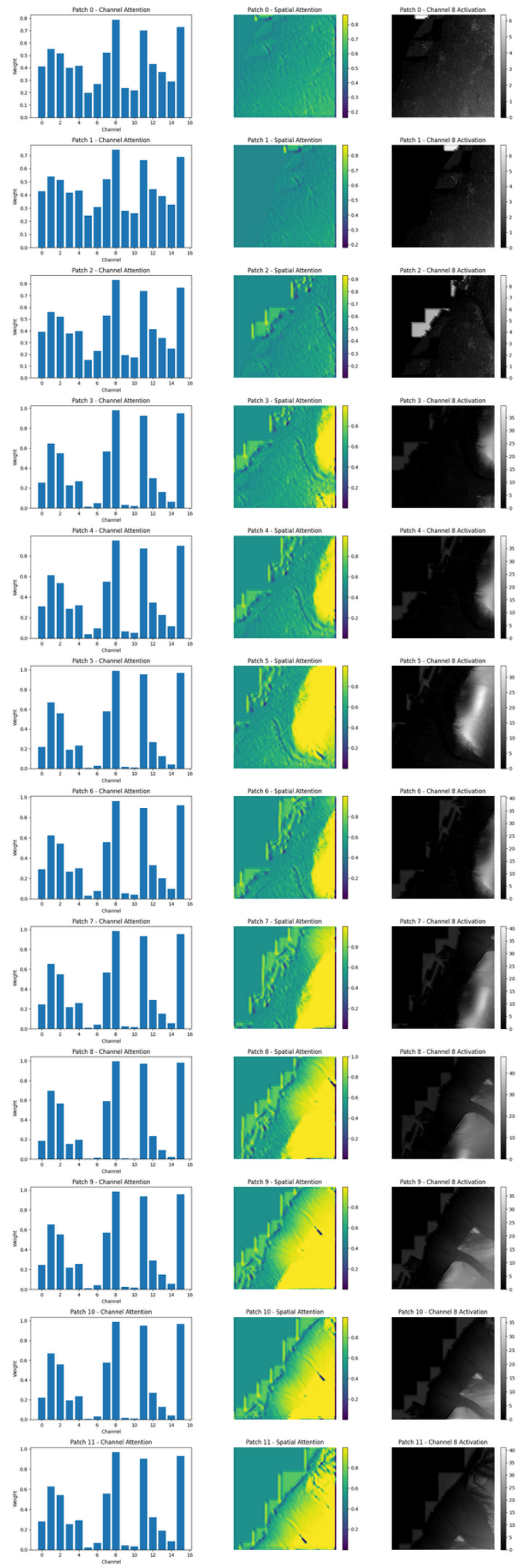
PRESENTED BY

鄭至亞

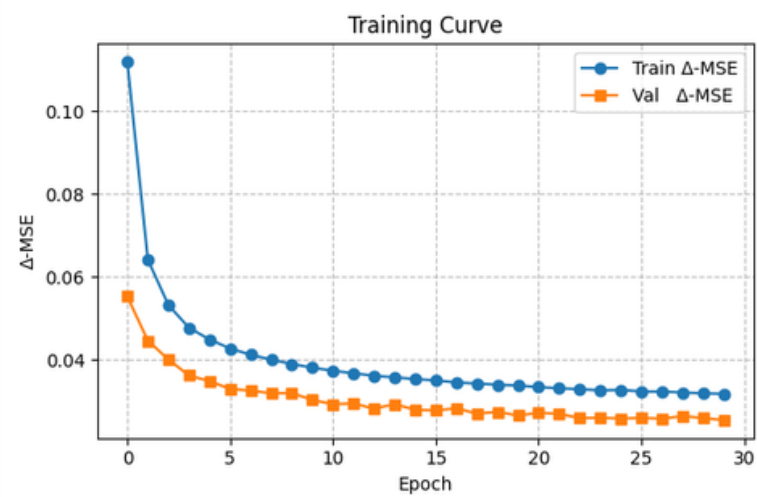
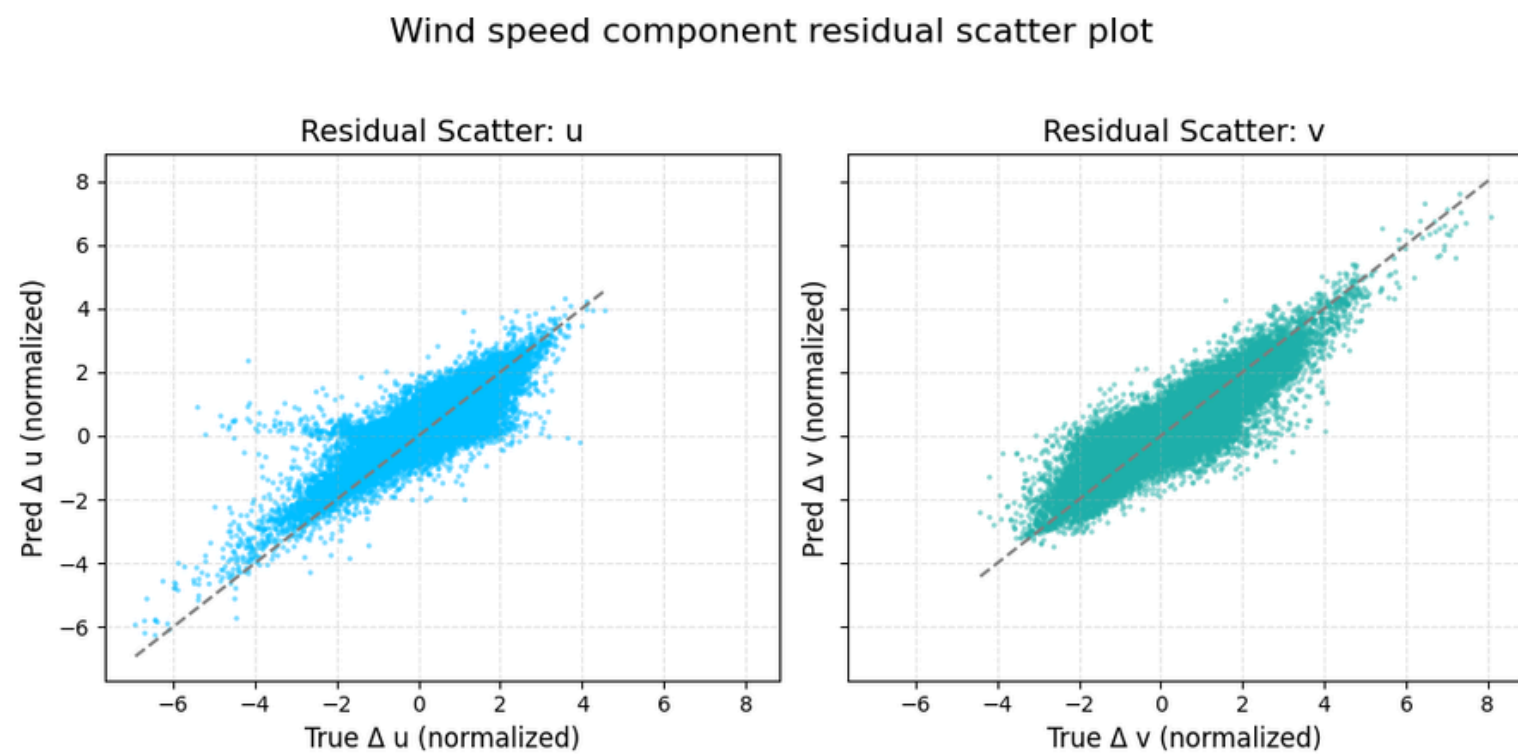
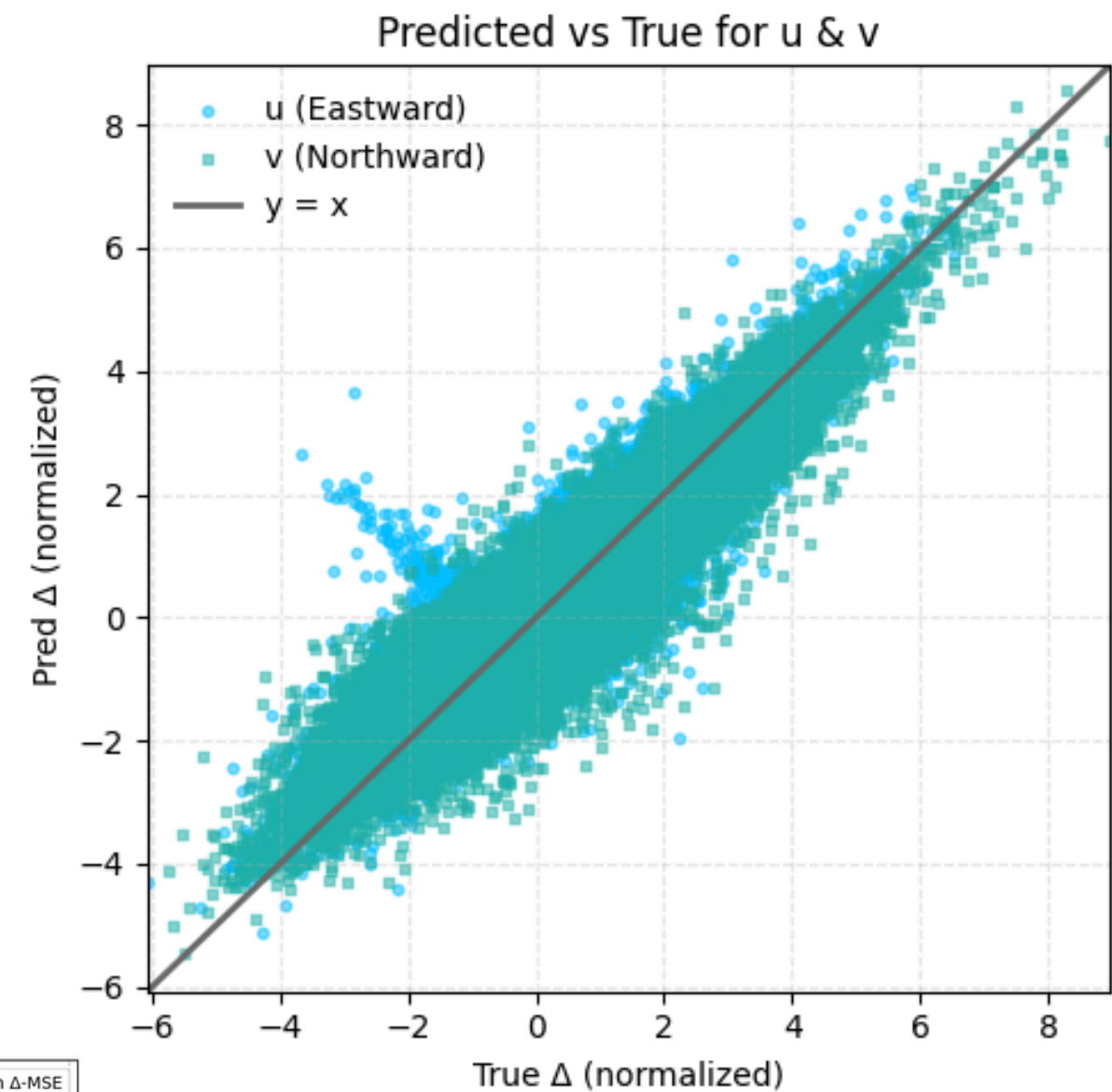
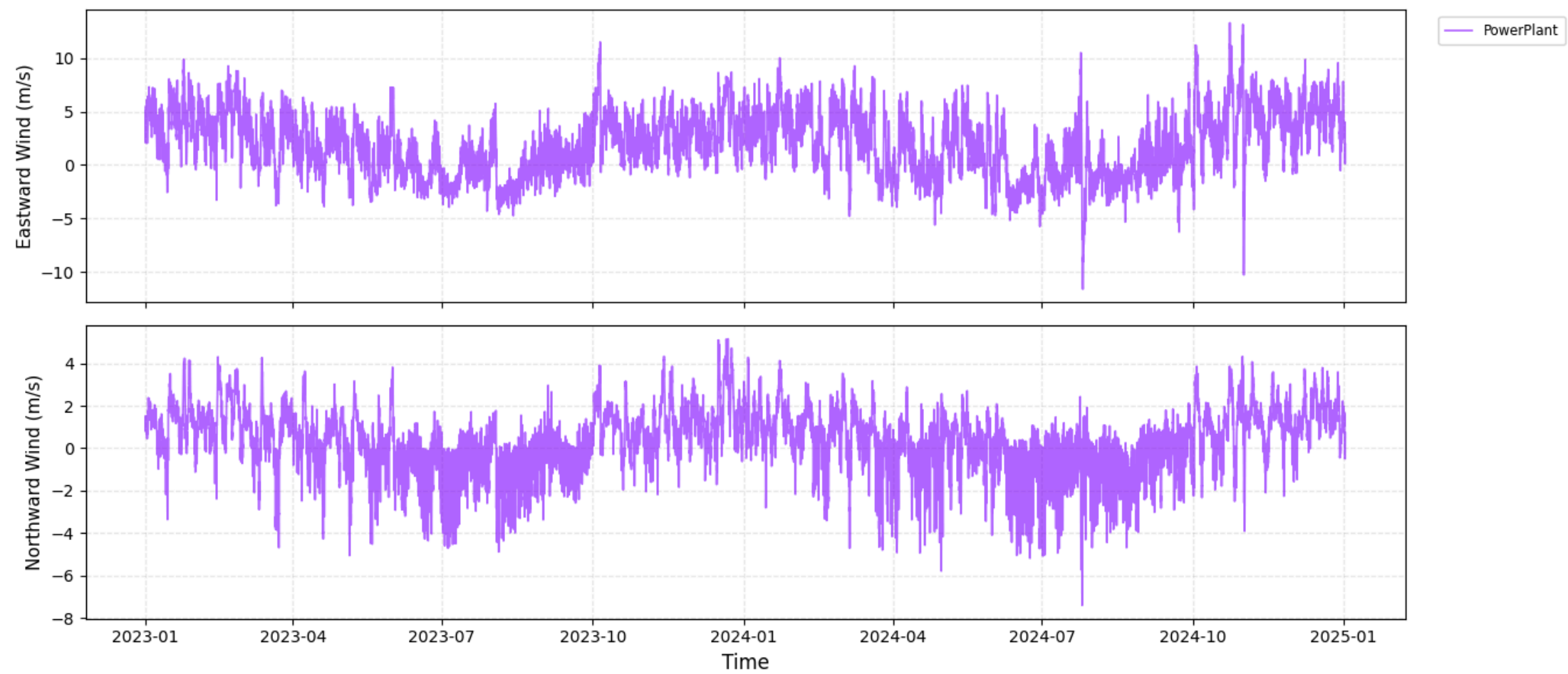
# 本週工作進度

| Task           | Status        | Notes              |
|----------------|---------------|--------------------|
| Attention      | ✔ Completed ▾ | 表現普通，但有時會注意高地      |
| 節點問題(僅以已知測站建立) | ✔ Completed ▾ | 圖結構建立時會考慮到新節點      |
| 在圖結構也加入注意力機制   | ✔ Completed ▾ | 但結果不好              |
| ERA5比較         | ✔ Completed ▾ |                    |
| 擴大模型容量         | ✔ Completed ▾ | 增加STGCN圖卷積層，R2➡0.9 |
| 填補CODIS資料缺漏    | ✔ Completed ▾ |                    |












Test on known nodes —— 模型+baseline vs 真值

|   |             |          |
|---|-------------|----------|
| u | RMSE 0.3241 | R2 0.905 |
| v | RMSE 0.3662 | R2 0.868 |

# 遇到的問題

1. 不知道怎麼反推
2. 模型把測站風場當成統一高度

## 下週&之後預計的工作進度與預期成果

| Task        | Status  | Notes |
|-------------|---|-------|
| 加入海拔特徵      |  Not started ▾ |       |
| 反推風場100m    |  Not started ▾ |       |
| 評估發電容量並比較真值 |  Not started ▾ |       |