**Input:**

1. Historical ED attendance: The hourly attendance
2. Long term trend
3. Autocorrelation lag(7 days\*24)
4. Hour of day
5. Day of week(not sure if needed given 3?)
6. Month of the year
7. Season(quarters, fiscal year start is different for NHS I belive, but need to confirm, quarter 1 may start from April and not Jan)
8. Holidays: List of holidays and festive days(Excel file)
9. Cobmined effect of holidays and hour of day:
   1. if today is holiday, its effect on ED could be seen in a particular hour of the same days
   2. lead effect: if today is holiday, its effect on ED could be seen in a particular hour of the day after the holiday
   3. lag effect: if today is holiday, its effect on ED could be seen in a particular hour of the day before the holiday
10. Sixnation(Cardiff plays either in Cardiff or another country): Excel file)
11. Cobmined effect of sixnation and hour of day
    1. if today is a rugby match, its effect on ED could be seen on the same day at in a particular hour
    2. If today is a rugby match, its effect could be seen few days before in a particular hour
    3. If today is a rugby match, its effect could be seen few days after in a particular hour
12. Weather data for Cardiff: temperature, rain, snow?

**Forecast horizons:** 24 hours

**Frequency**(for generating forecast): 24 hours

**Output:**

Forecast distribution for each hour

Point forecast for each hour

**Evaluation:**

Point forecast: RMSE, MAE

Forecast distribution: Pinball score, ??

**Potential distribution:**

Poisson regression

Hypergeometric regression

Negative binomial regression