In the explorative part of our analysis we will now try to discover hidden systematologies and use them to suggest how a good trader should behave. The analysis is divided into two parts, the examination of time patterns and secondly non time patterns.

**Time patterns:**

Starting by uncover monthly systematologies, it can be stated out that the price premium drops is especially increased from September to March. Thereafter, it remains at an almost constant level throughout the summer. In the chart for the standard deviation, however, it can be seen that in the months from September to march, the standard deviation is also particularly high, until it remains at a constantly low level over the summer. Therefore, it can only be suggested that from September to March it is particularly worthwhile to buy on the intraday market, but there may also be a greater risk of losses due to a high standard deviation. The average for the price premium on a daily level varies between 5 and 10 €. Between the sixth to eighth day, the thirteenth to fifteenth day and the twenty-fifth to twenty-seventh day of each month there is a slight increase in the price premiums. However, in the standard deviation chart, exactly the sixth to eighth and thirteenth to fifteenth are the days with the highest standard deviation, leading to the conclusion that safe traders should only take advantage of the increase from the twenty-fifth to the twenty-seventh to buy on the intraday market. Finally, on the graph for the hourly average prices it can be seen that price premium is particularly high from nine to thirteen o'clock and from eighteen to one o'clock at night. Nevertheless, the standard deviation from seventeen to twenty o'clock is exceptionally high, which leads to the conclusion that it is particularly worthwhile to buy from nine to thirteen o'clock and from twenty to one o'clock at night on the intraday market.

**Non-time patterns:**

In general, a tendency to positive price premium can be found in the data, which can also be seen on the distribution on the provided figure [pricePremiumHist.png]. In numbers 71.2% of all premiums are positive and to get a good overview which exogenous variable has unequally distributions of positive and negative price premiums, several violin plots are created and qualitatively analysed [violinsConsumption.png, violinsParticipants.png, violinsPriceHoliday.png, violinsWeather.png, violinsWindSpeed.png, violinsSnow.png]. Some of the variables show some obvious discrepancy between the distribution of positive and negative price premium, especially the weather related attributes like “daily sunny hours” or “daily Snow Volume”. Since a visual analysis alone is not that precise, another approach is used by dividing the occurrences of a positive premium by the number of all price premiums, in order to quantify the share of positive price premiums against negative ones in terms of the different variables [dailySunnyQuantHist.png, dailyTempQuantHist.png, holidayAfterQuantHist.png, numFreezingDaysQuantHist.png, priceDayAheadQuantHist.png, snowQuantHist.png]. It can be observed from the visualizations that only for one value, when the daily snow volume is around 300 cm, it can be recommended to buy on day ahead market. It should be considered that this analysis does not take into account any balancing penalties or limited electricity market volumes. For such restrictions it can be possible that the expected price premium is more balanced.













