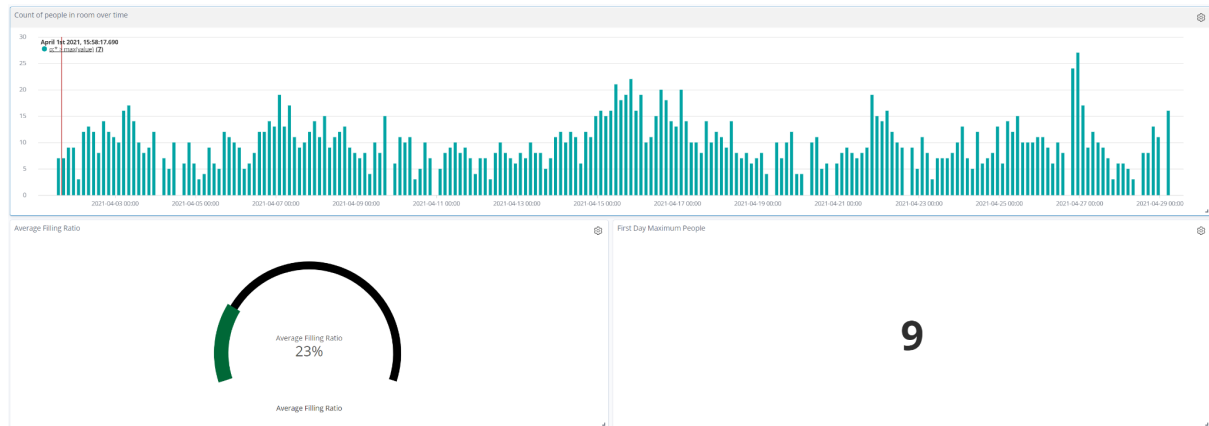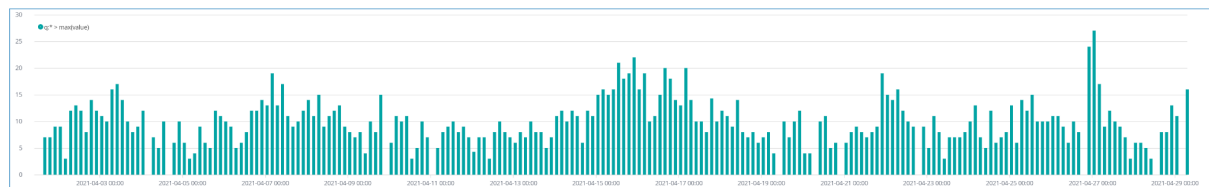# Visualizations for Historical Data

Dashboard Overview
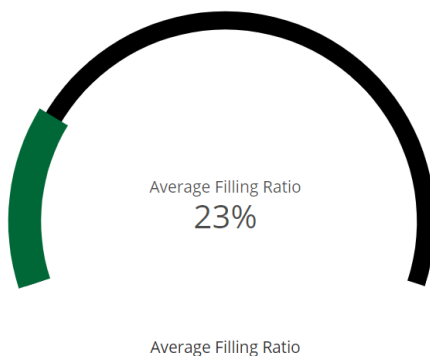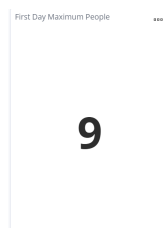

1: Count of people over time

Timelion with bars showing the max value for each bucket

2: Average Filling Ratio

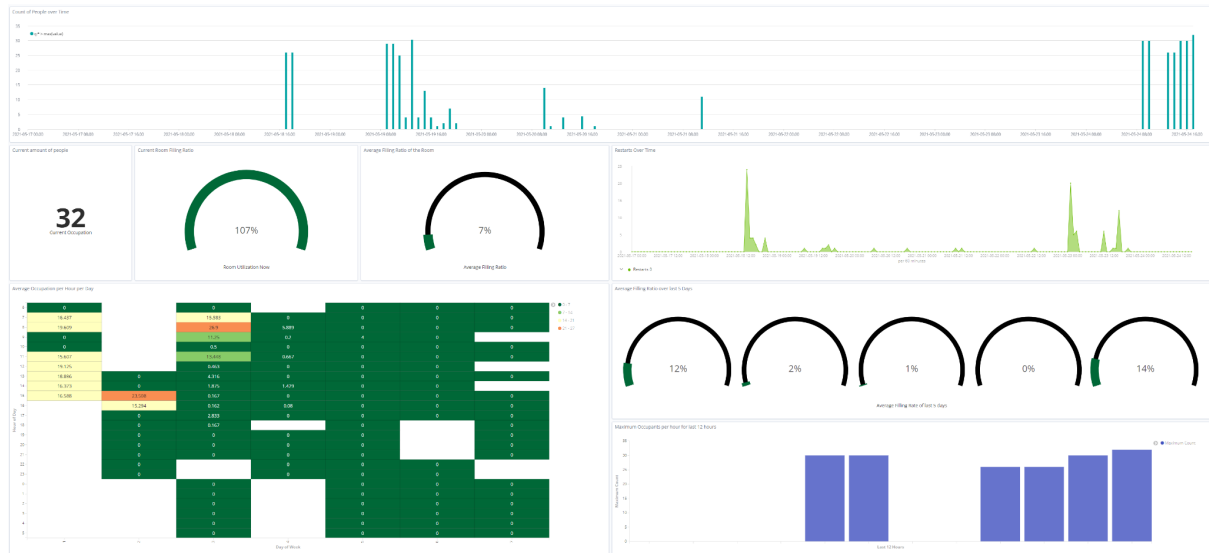Goal Visualization with Ranges 0-30 Showing the average filling ratio for the room over hour buckets

3: Maximum number of people on the first day

Metric Visualization showing the data for the first day available (first day was kinda hard to judge from a list of just enter and exit events with no timestamps). We assumed one event every 15 minutes.
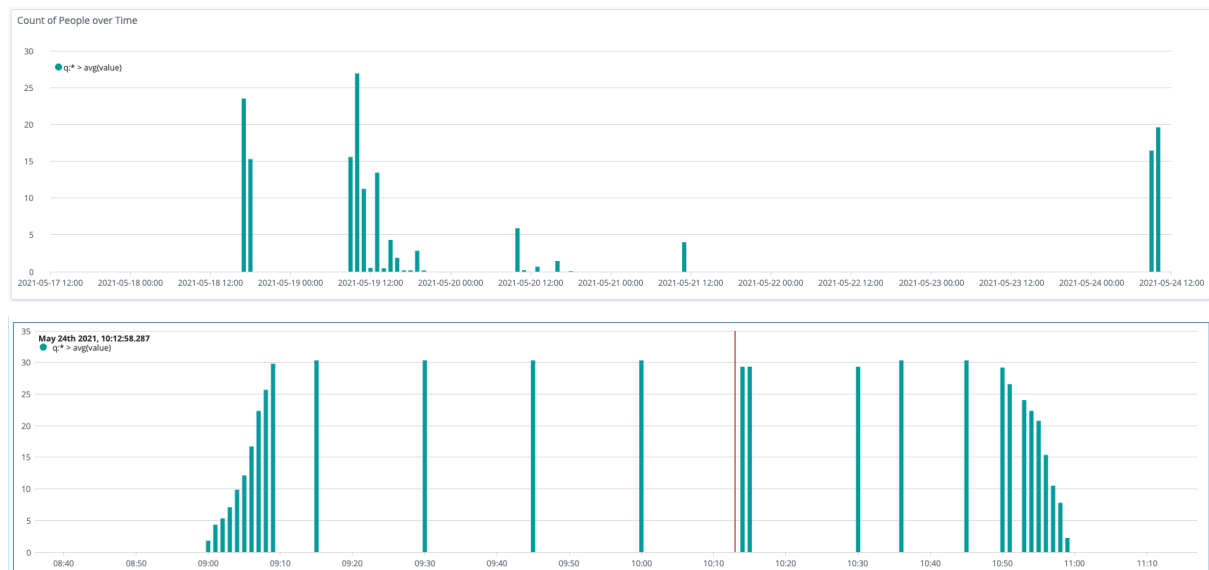
Visualizations for Fetched Data
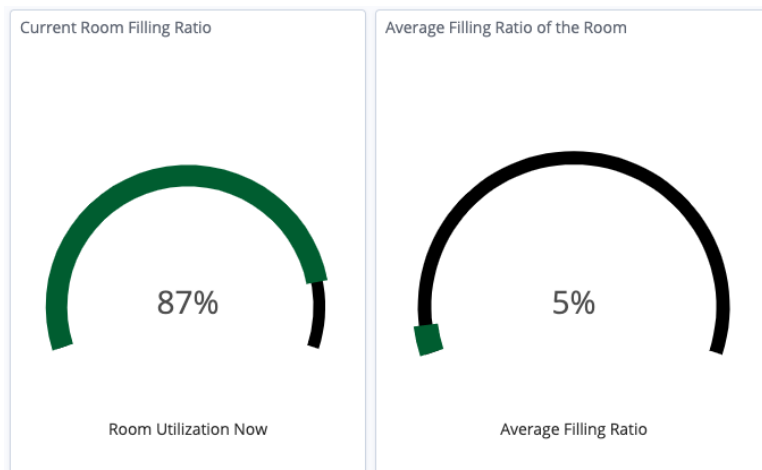
Dashboard Overview:

The arrangement of the visualizations in our Dashboard.

Count of people in the room over time (Timelion Bars)

Bar Visualization required by assignment 4, shows the number of people in the room over time. Top image shows the data recorded over the last 7 days, bottom image shows data for Monday morning.

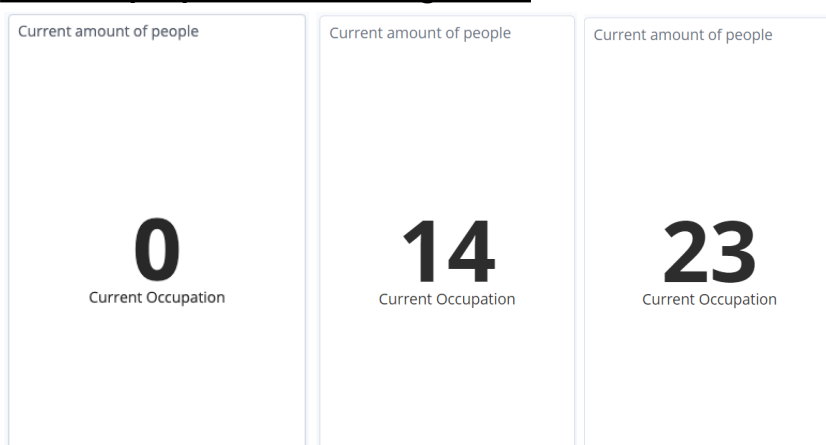## Average and current filling rate of the room (Gauge Chart)

This *Goal Visualization* shows the average and current filling ration over time. Max amount of people is 30, respectively 100%. (Average is over the whole time, as requested in the assignment)

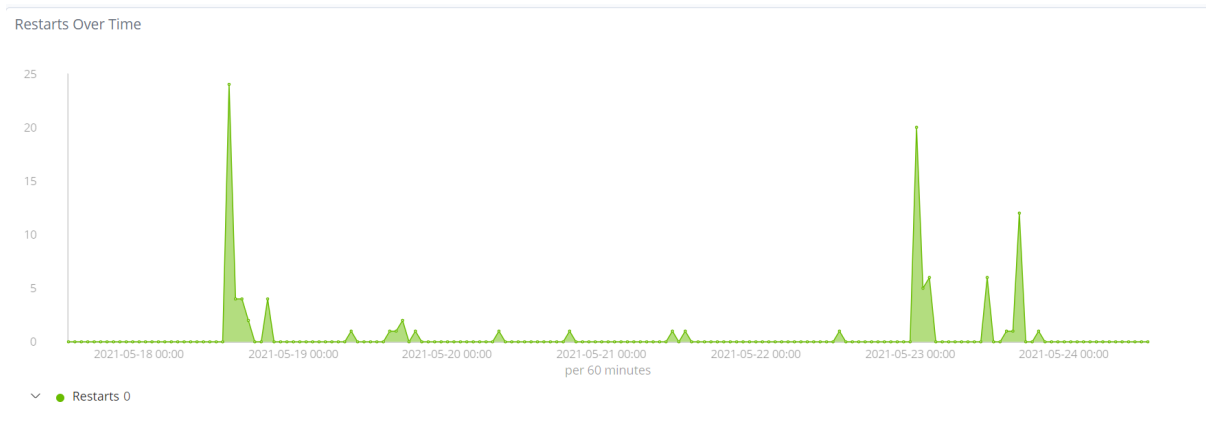## Average Filling Rate over the last 5 days

Multi *Goal Visualization* showing how the room was used over the last 5 days, takes the average of hourly averages. Can be used to quickly see if the room is usually filled adequately.
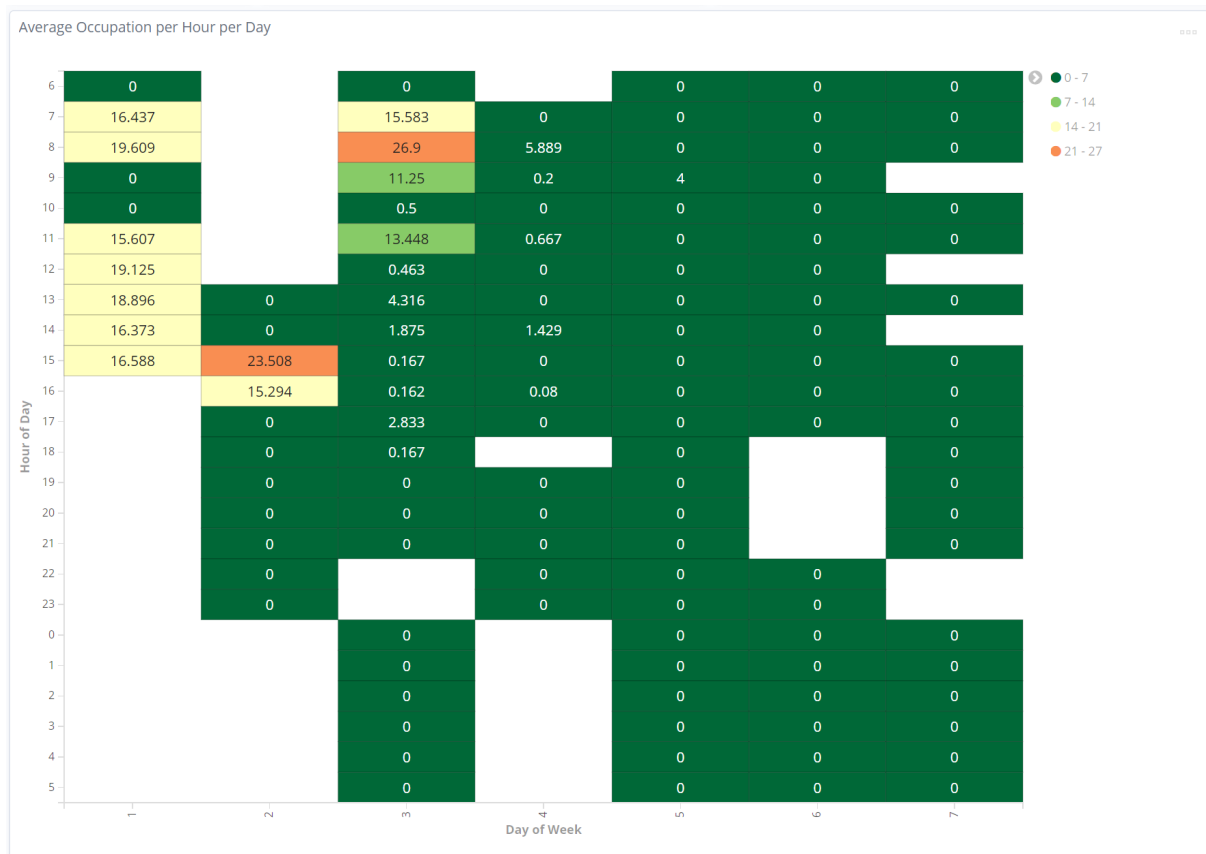
Count of people in the room right now

Simple m*etric* visualization showing the amount of people in the room right now (screenshots taken from different times). Users can instantly see if the room is occupied.
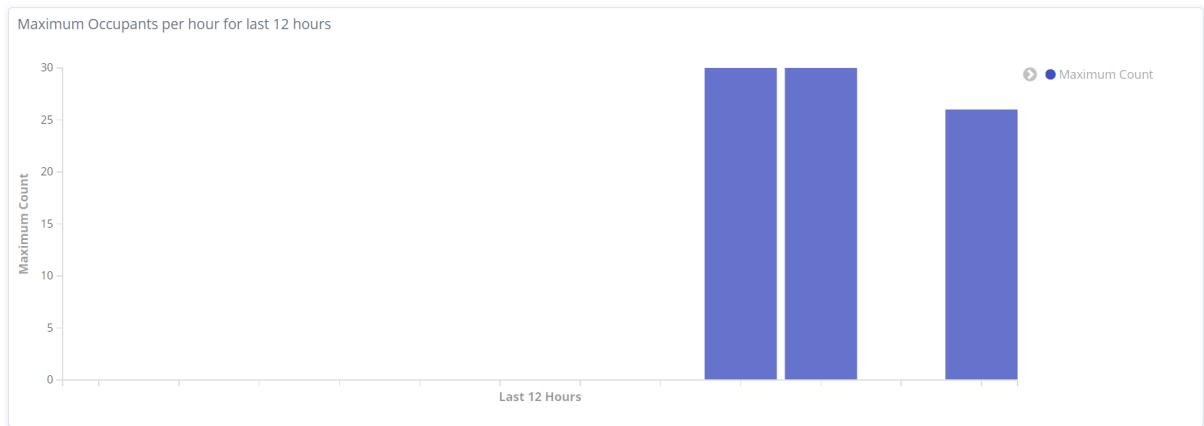
Restarts over time

This *visual build* shows the amount of restarts of the esp32 board in the selected timeframe. Can be used to investigate missing data, explain anomalies in the data (if a device restarts and resets the count to 0)

Visualization of the Average Occupation for each hour each day (Heatmap)

Heat map visualization showing the average number of people in the room for each day and hour. Shows when the room is usually free, when it is full etc. This is basically the timetable for the room. Right now the collected data is not yet extensive enough to fully take advantage of this, but over time it will be better.

Maximum number of people in the room for each hour in the last 12 hours

Maximum Occupants per hour for last 12 hours

The bar chart visualizes the maximum number of people per hour over the last 12 hours. This could be used to evaluate whether the room was used to capacity in the last hours.