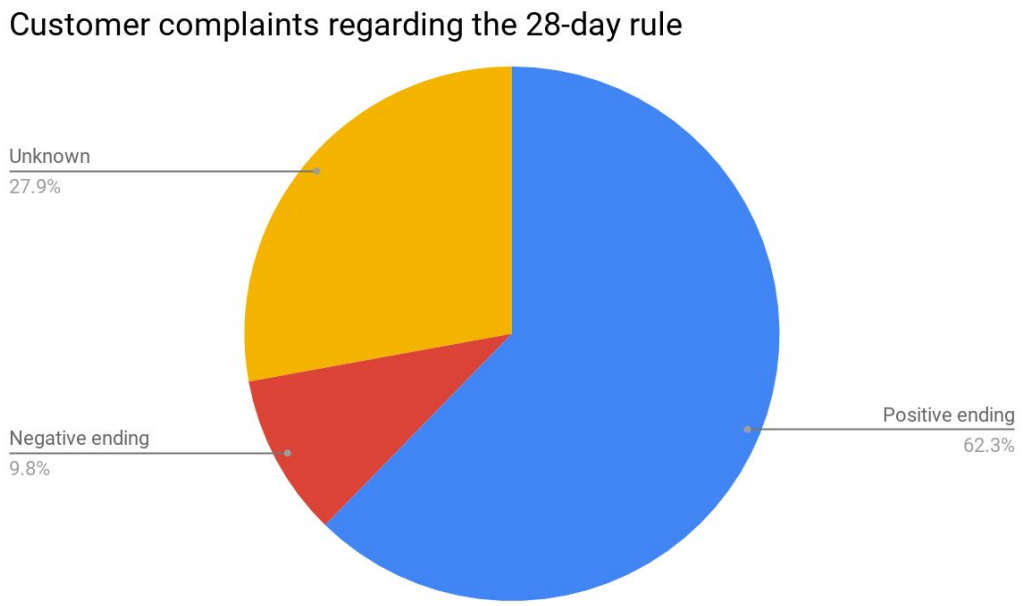
The challenges were completed with Python 3.8 with numpy and pandas packages

Task A:



A total of 61 valid complaints regarding the margin position being liquidated due to the 28-day rule for U.S. citizens were found, in which:

- 38 cases (62,3%) have positive endings (with thank you and happy vibe)
- 06 cases (9,8%) have negative endings (with criticism, threats, and negative vibe)
- 17 of them are email replies to the customers from the support team, hence unknown.

61 complaints account for 1,17% of 5188 comments in the dataset.

More than 95% of the complaints with customers' responses (42 cases) stem from the unawareness of the 28-day rule.

In the negative ending cases, most customers threatened to leave the platform.

Task B:

Data summary and charts:
https://docs.google.com/spreadsheets/d/1gIDq39FpjfhW_apPqH64rPdaQzocTflfoiWKBTj4P6o/edit?usp=sharing

B.1 Comment on the coverage
(Refer to Data Summary sheet 'Task B')

- Hour 11-15 every day (except Tuesdays) is the time period when the department consistently falls short of 100% coverage.

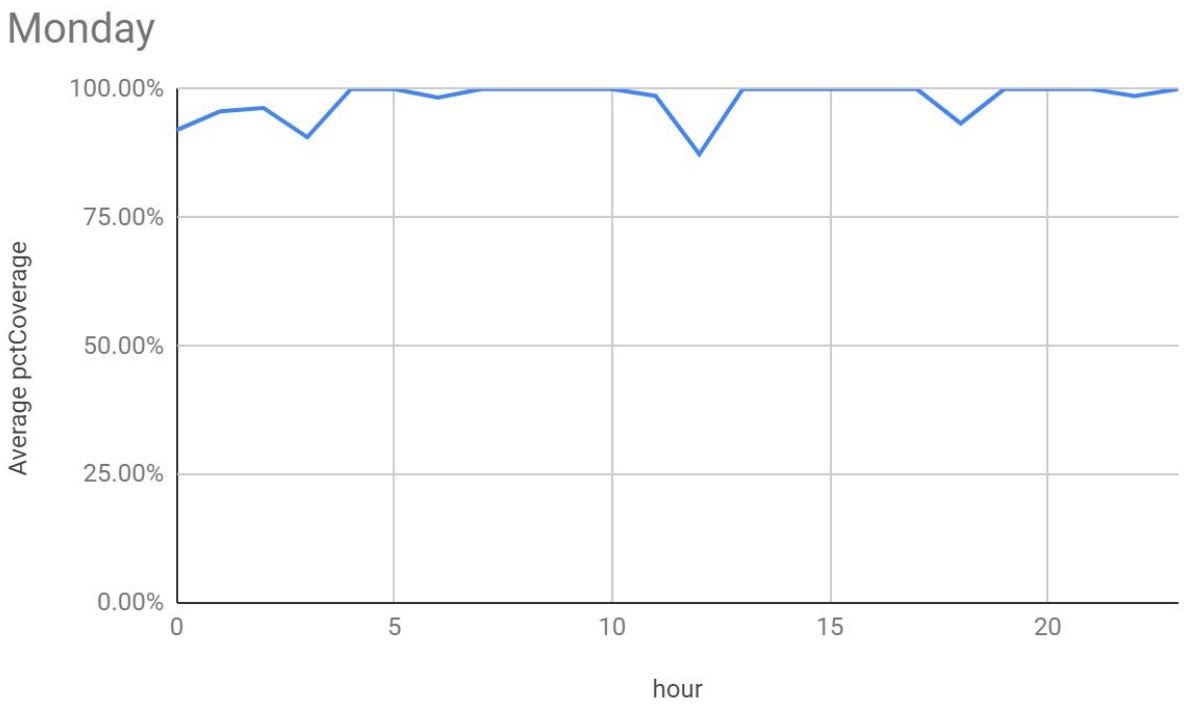
- Demands for more support rise on Fridays, Saturdays, and Sundays during the daytime (Hour 5-15)
- Sundays have significantly low support coverage all day.

B.2 Method to estimate the chat volumes demand for every hour of every weekday

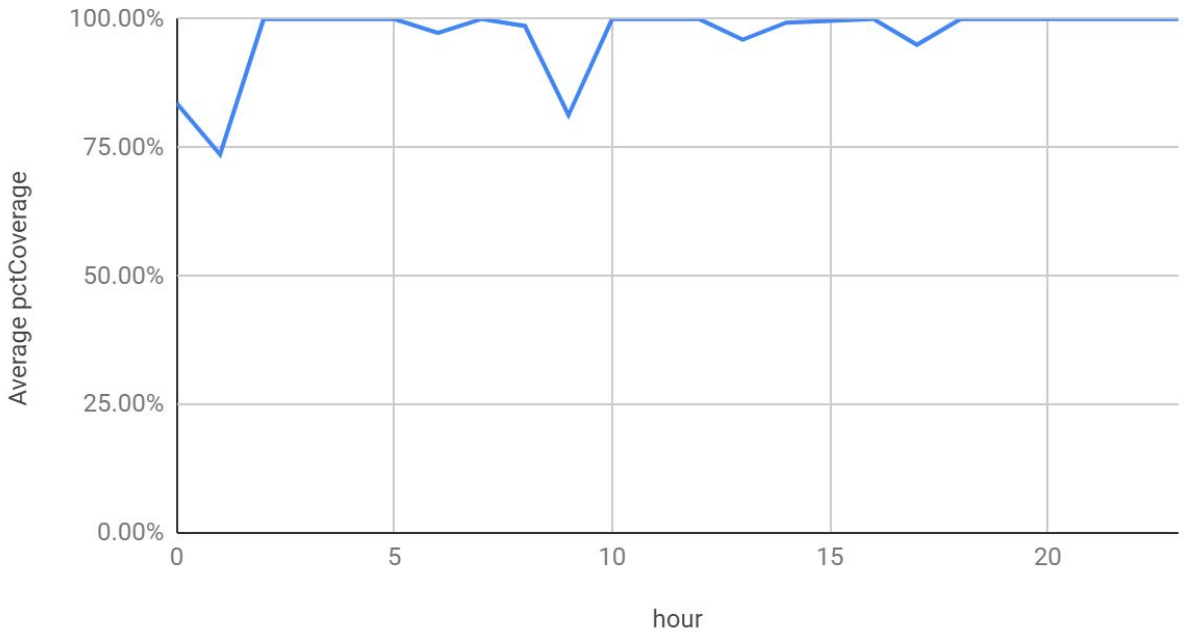
- Record the average coverage percentage of every hour every weekday = avgCoverage
- Record the average number of provided chats of every hour every weekday = avgChats
- Demand volume = avgChats / avgCoverage

B.3 Graphs

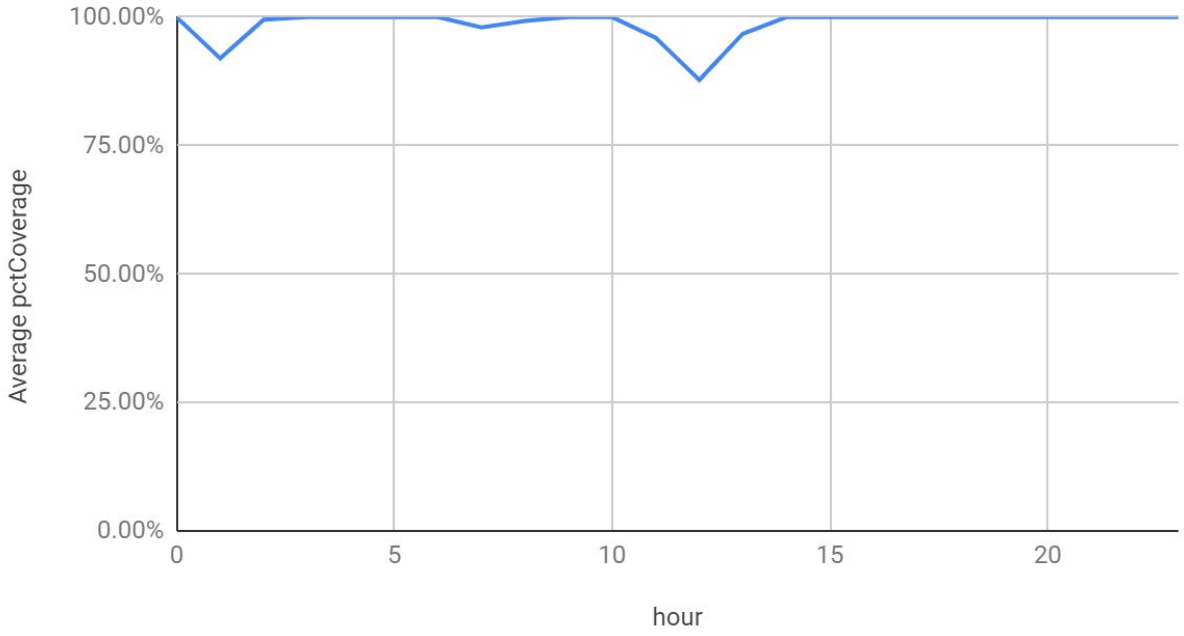
The charts below illustrate the average support coverage at every hour of every weekday



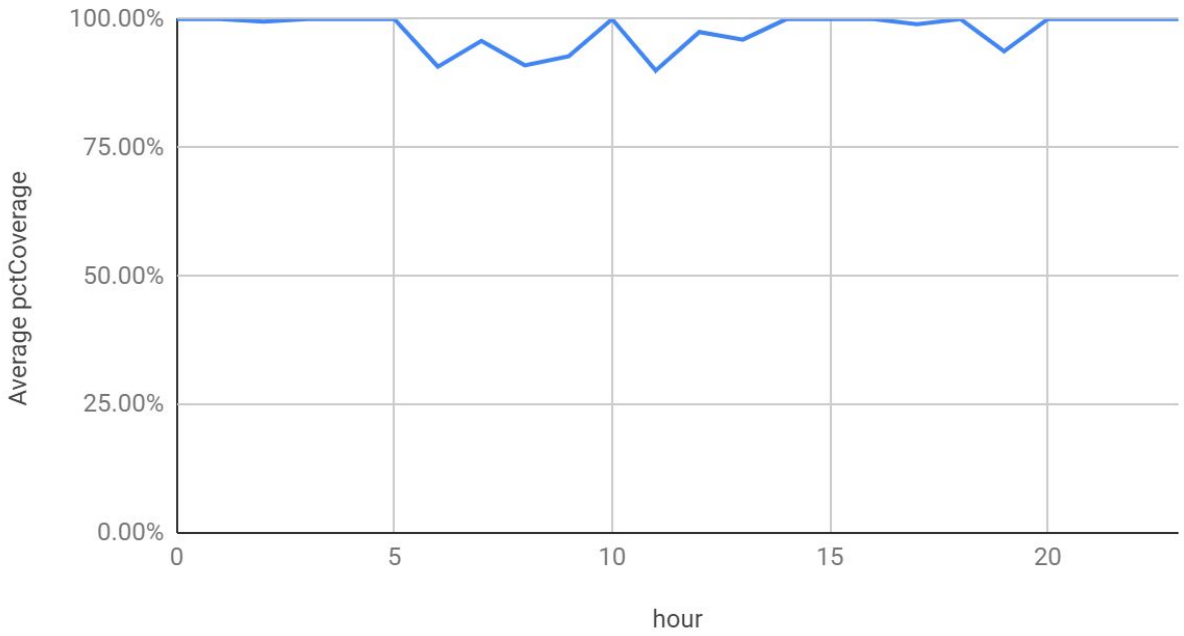
Tuesday



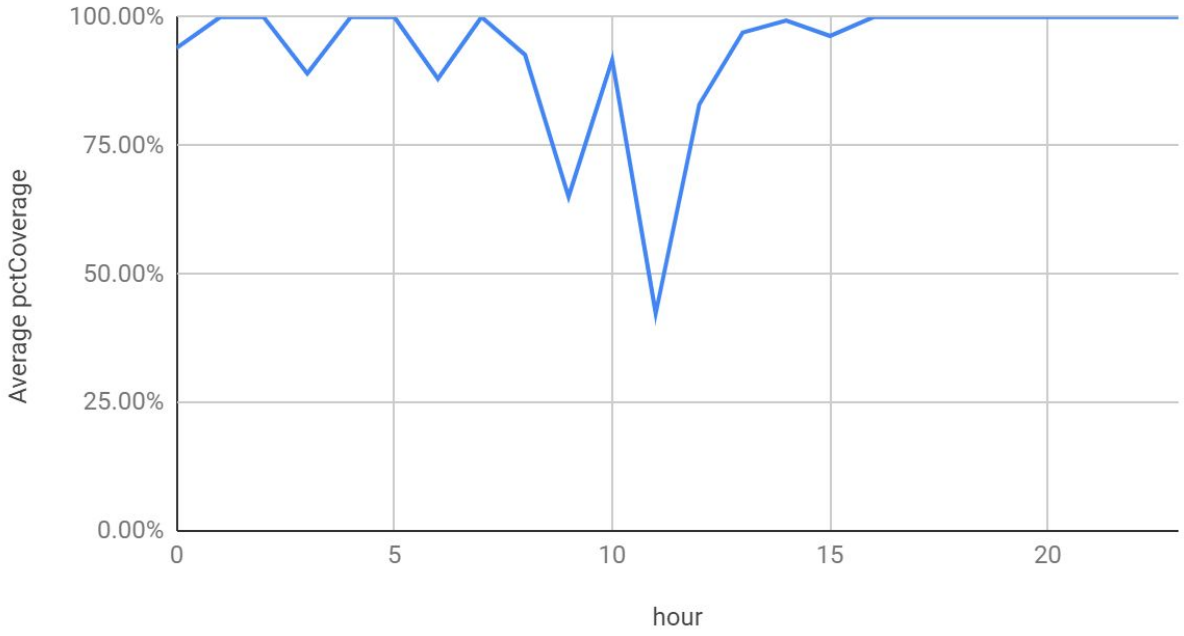
Wednesday



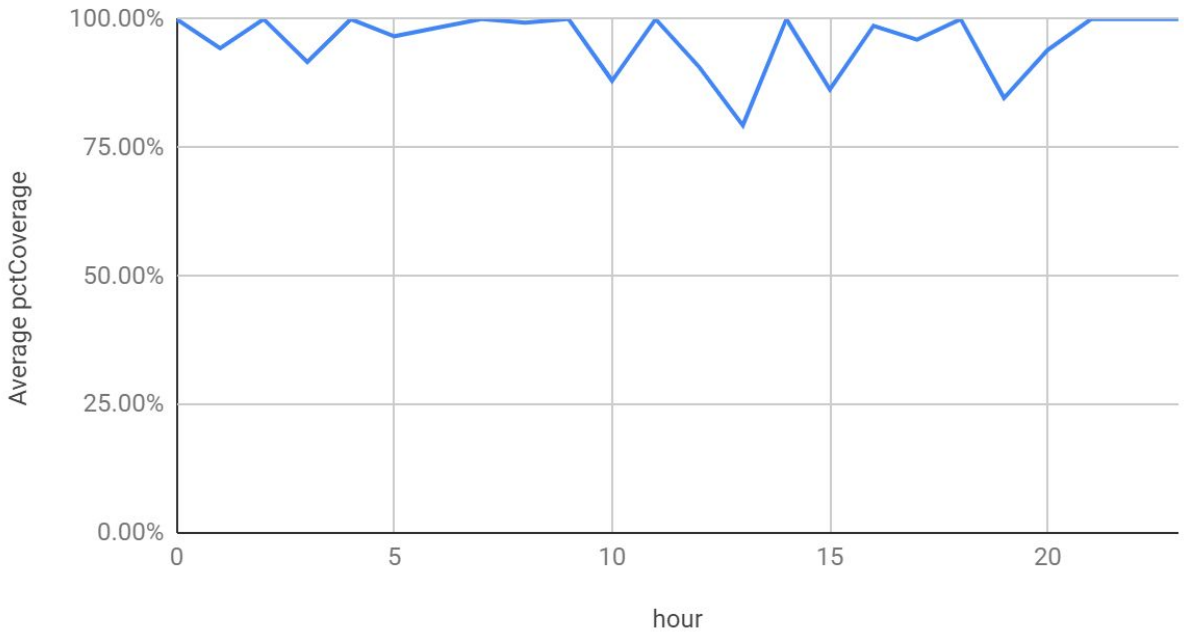
Thursday



Friday



Saturday



Sunday