

Video Play Failure(VPF) Sky Germany

Huyen Priet-Nguyen

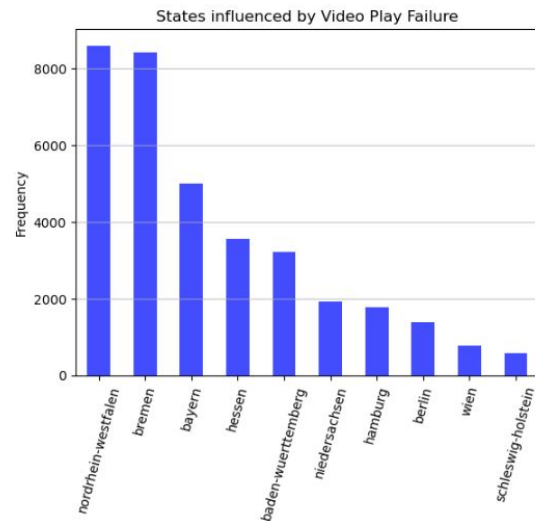
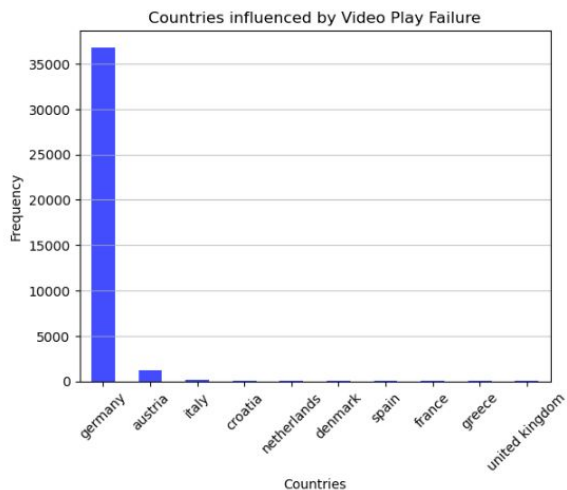


Dataset and data preprocessing

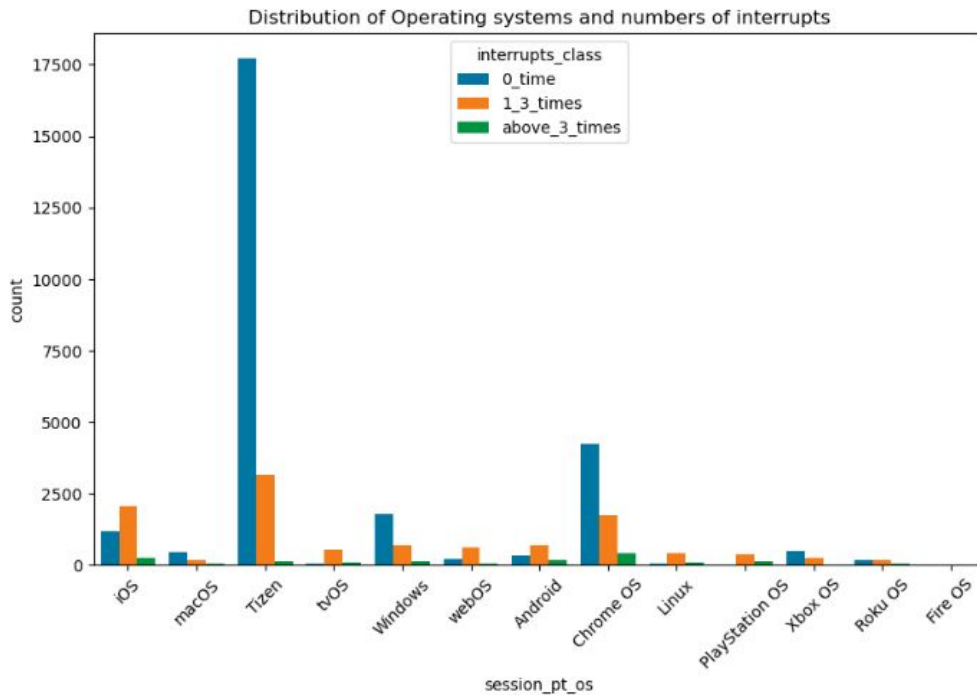
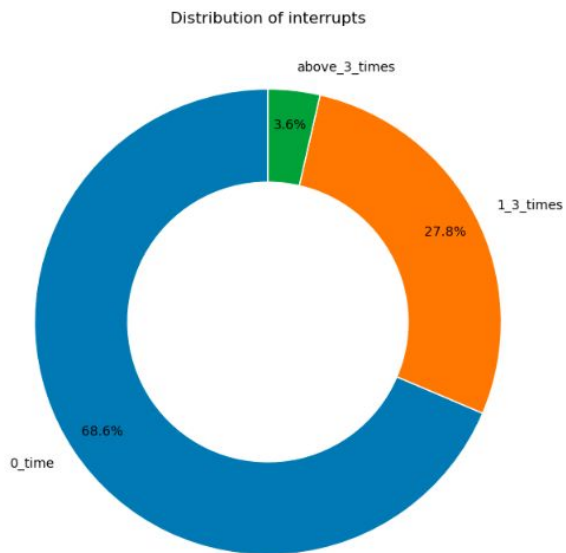
- 38733 rows, 41 columns
- Remove columns :
 - **With low variance:** Day(only day 2020-08-19), Propositions (only 'SkyDE'), Country (95% are Germany), StartupError, browser, vpf, NetworkType, session_browser_version, session_source
 - **Many nan values (> 99.9 %):** session_device_brand, session_device_model, session_channel_id, session_goal_id, session_viewer_id, session_episode, session_out_of_home'.
 - **Not meaningful for use:** ViewerID
- Filling nan values:
 - Replace missing values with the most frequent value (>95%)
 - Put to another category 'unknown' if the most frequent value is less than 95%
- Rename and group several categories together: *session_player_name*

1. What was the impact

- Vpf influences 38733 users, 29 countries and 181 states
- 95% from Germany and 56,8% from 3 States:
Nordrhein-westfalen, Bremen and Bayern
- The complaints come from users watching various contents,
98% live



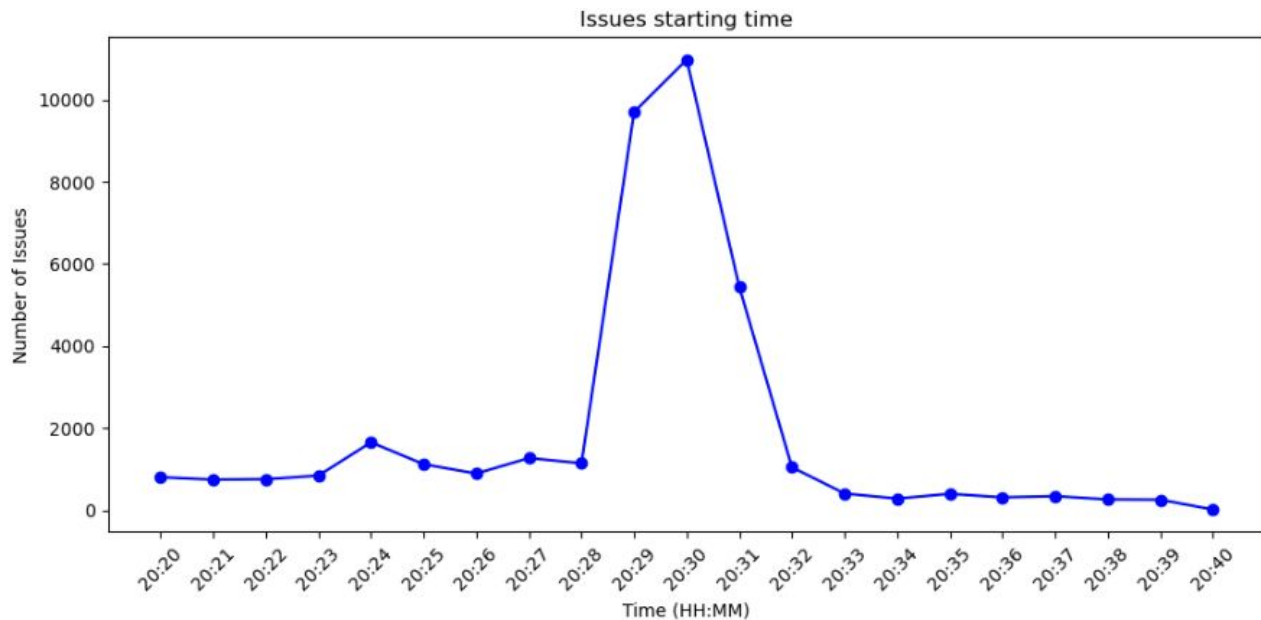
Numbers of interrupts



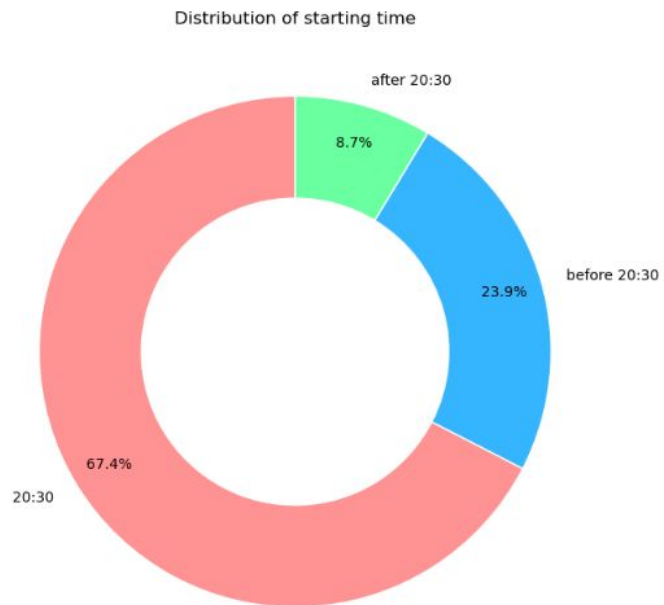


2. Significant increase time point

The increase of problems starting at around 20:30



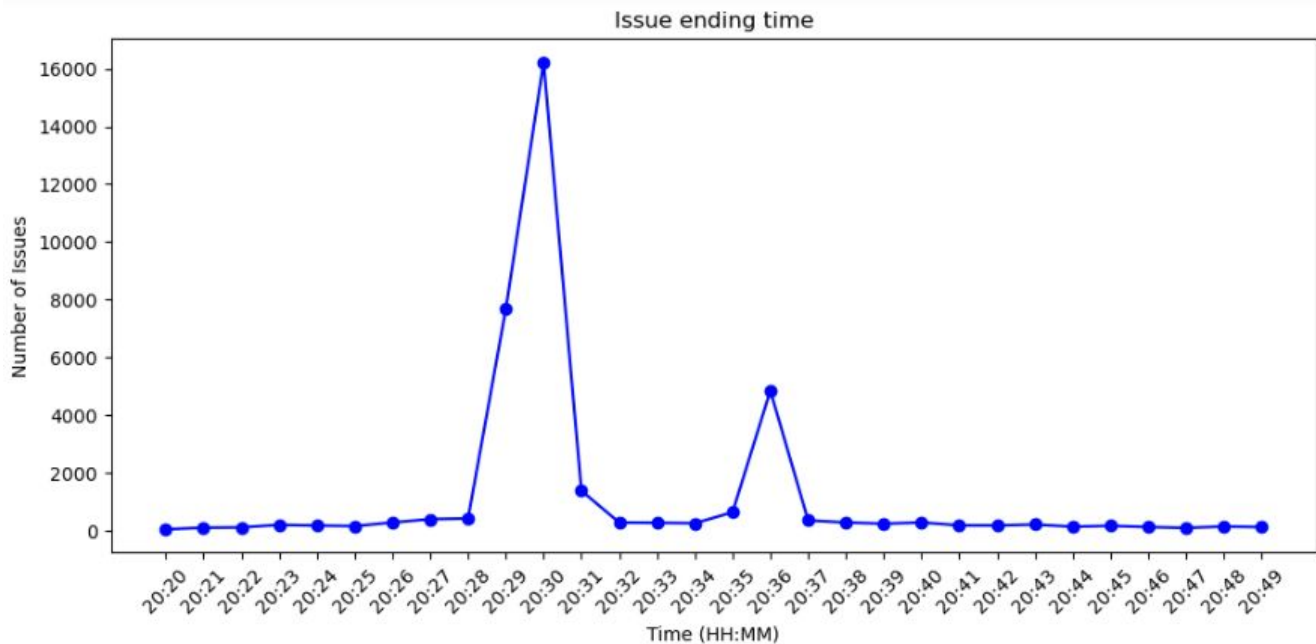
- Interrupts starting from 20:20 - 20:40 of day 2020-08-19
- 67,4% of issues starting at around 20:30



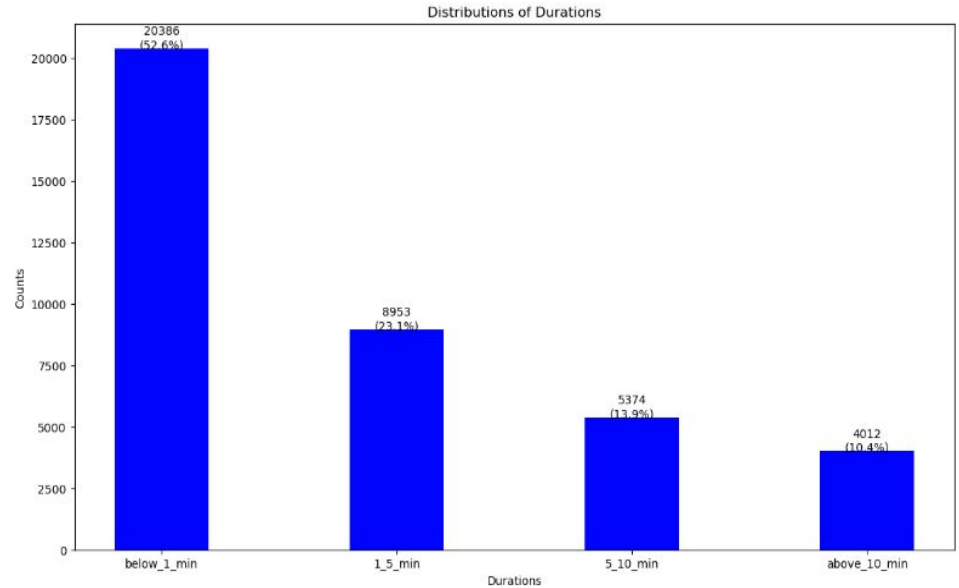
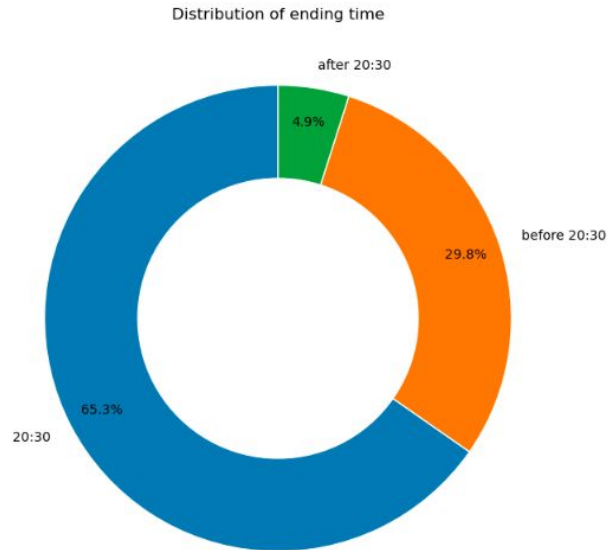


3. Issue subsiding time point and duration

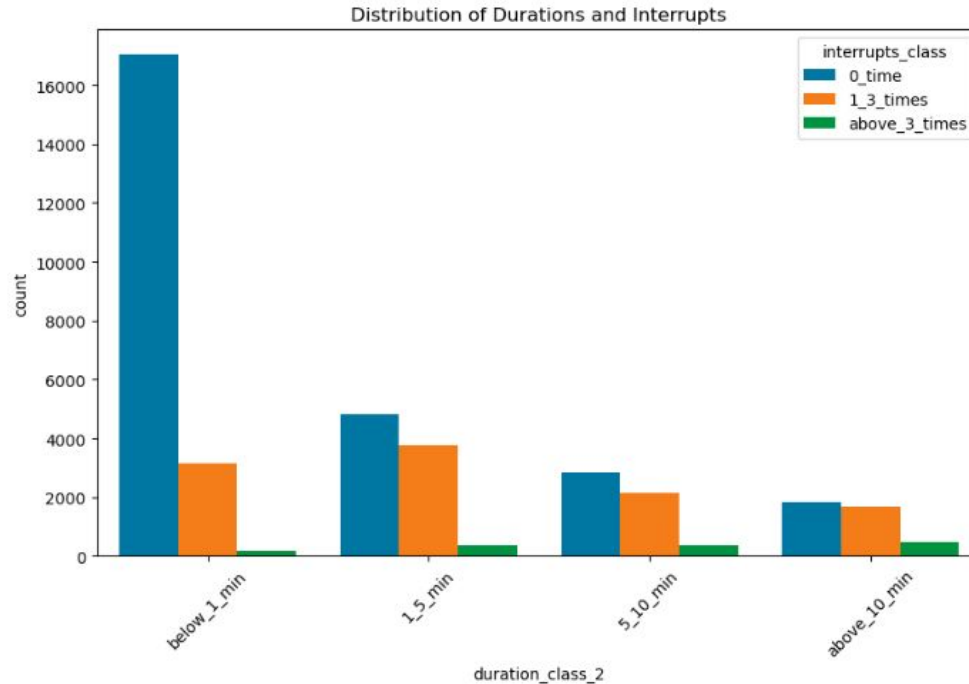
Most of the issues ending around 20:30



- 65% of the problems ending at around 20:30
- 52,6% of the interrupts that occurred less than 1 minute

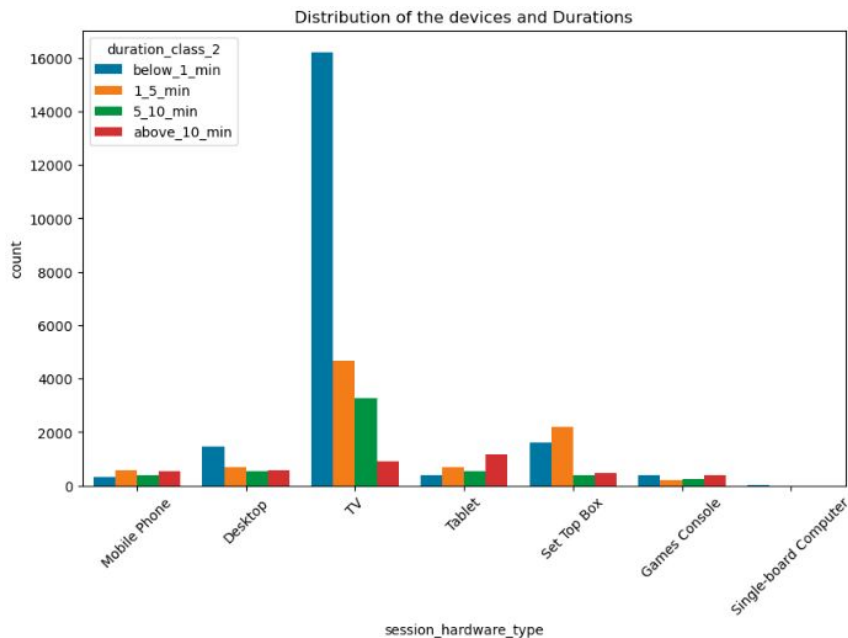


- The number of interrupts is almost proportional to the durations
- Minor Problems: 44% of issues has no interrupts and duration less than 1 minute

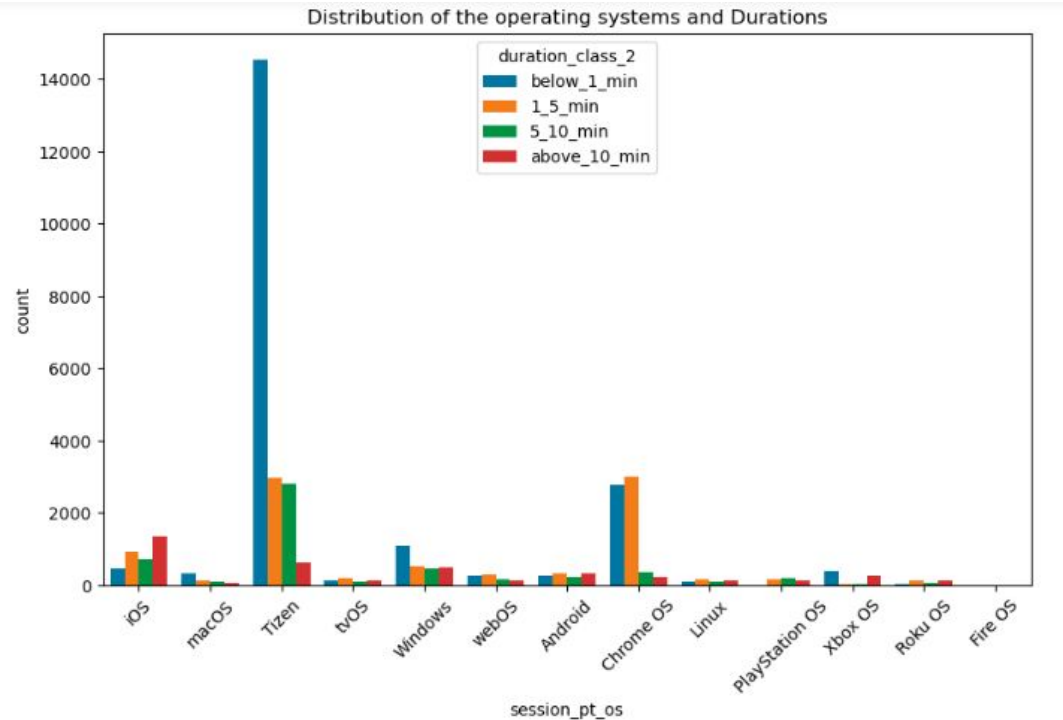


4. Splitting the issues based on specific device, operating system and player

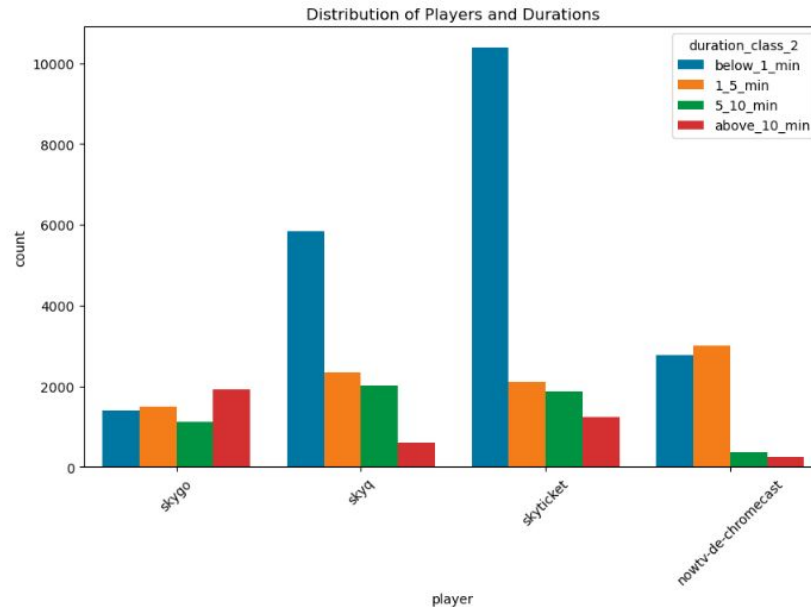
- The TVs has mostly below 1 minute interrupt, the tablets and Mobile Phones have most longer duration



- Tizen has the most shortest durations
- iOS has the most longer durations despite its small percentage in distribution of operating systems

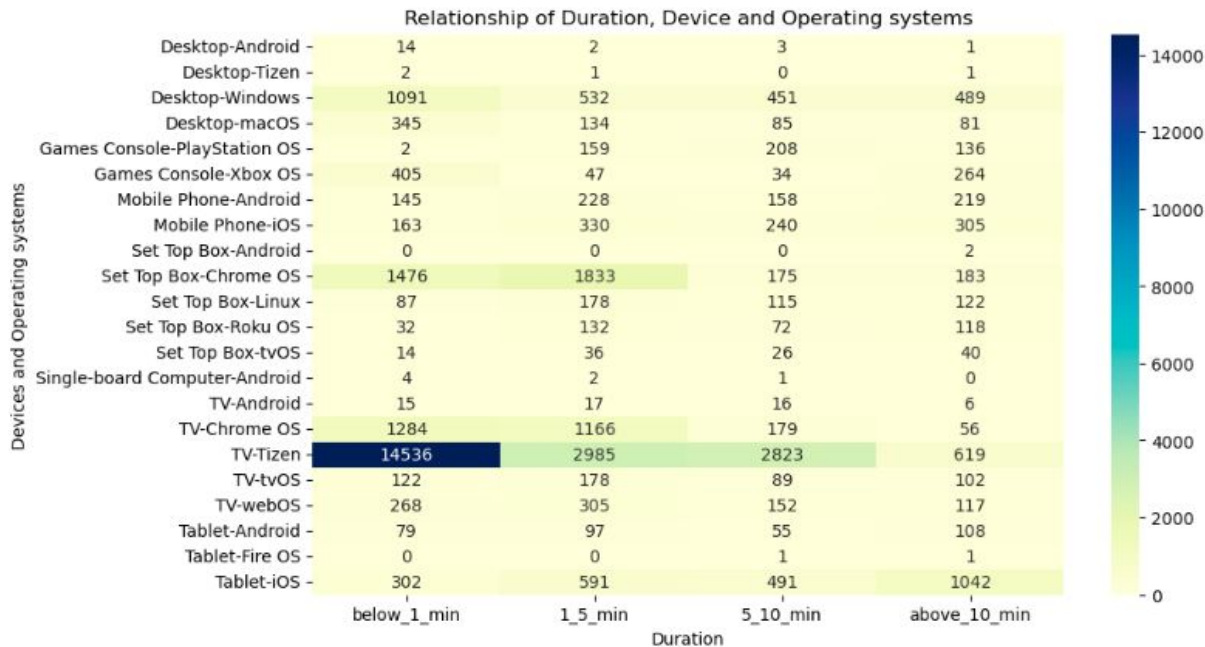


- Skyticket has the most shortest durations
- Chromecast has the most 1-5 minute durations
- Skygo has the longest durations despite its smaller percentage in distribution of operating systems



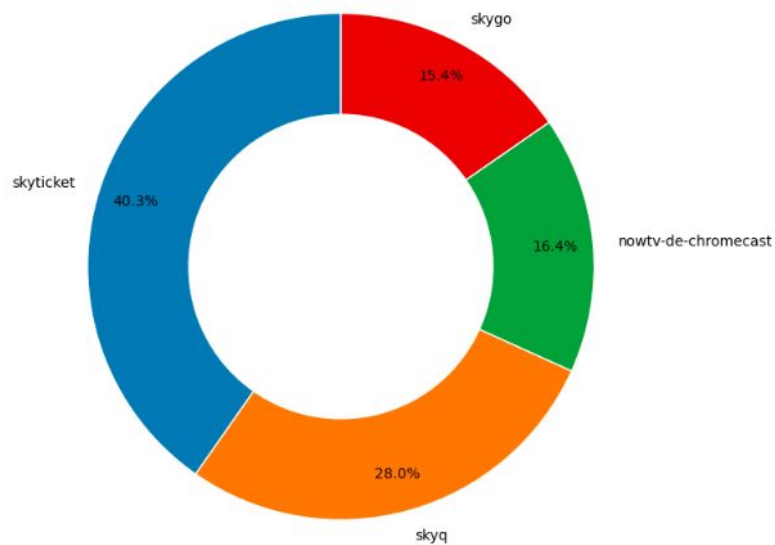
Duration vs Devices and Operating systems

- Among the lower durations: the popular combinations of Devices and Operating systems are: TV-Tizen, Set Top Box- Android and Desktop-Windows
- Among the longer durations: the popular combinations of Devices and Operating systems is Tablet iOS

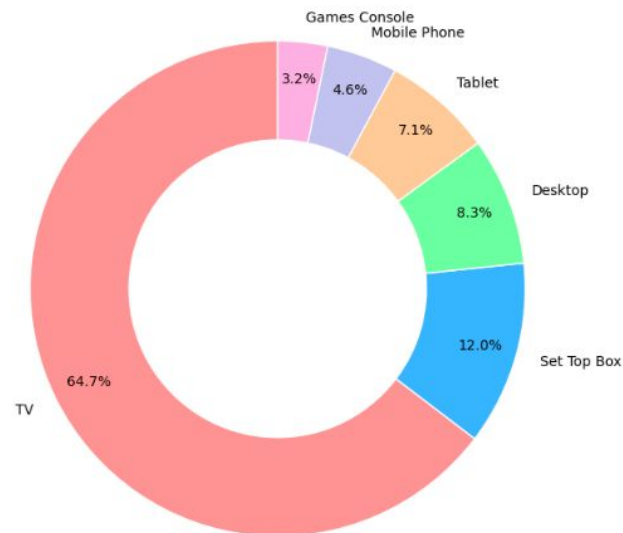


Players and Devices

Distribution of players

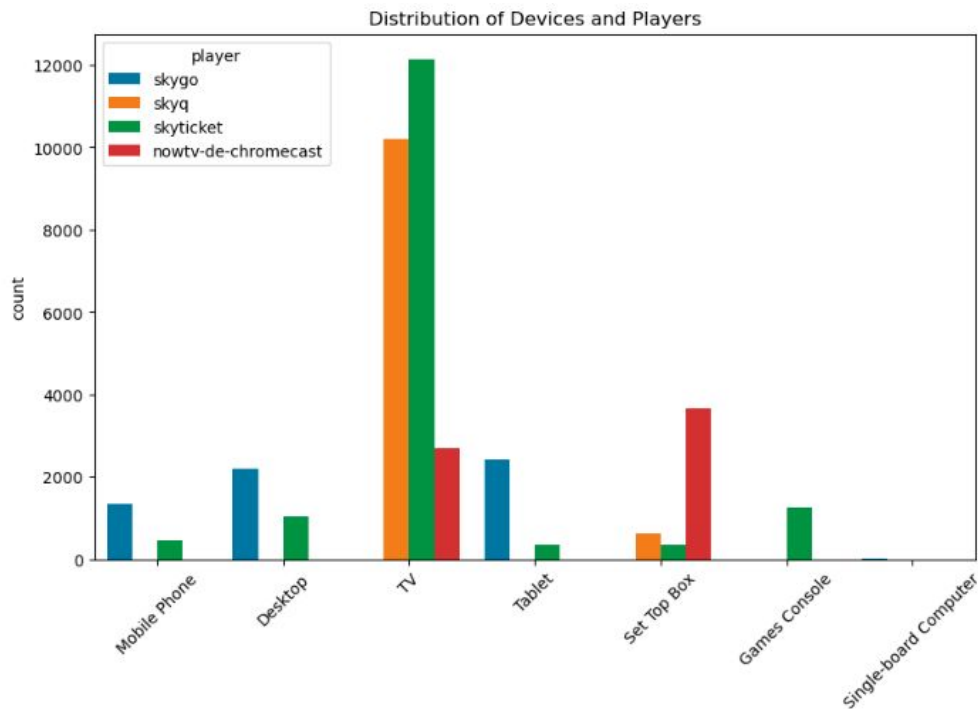


Distribution of Devices



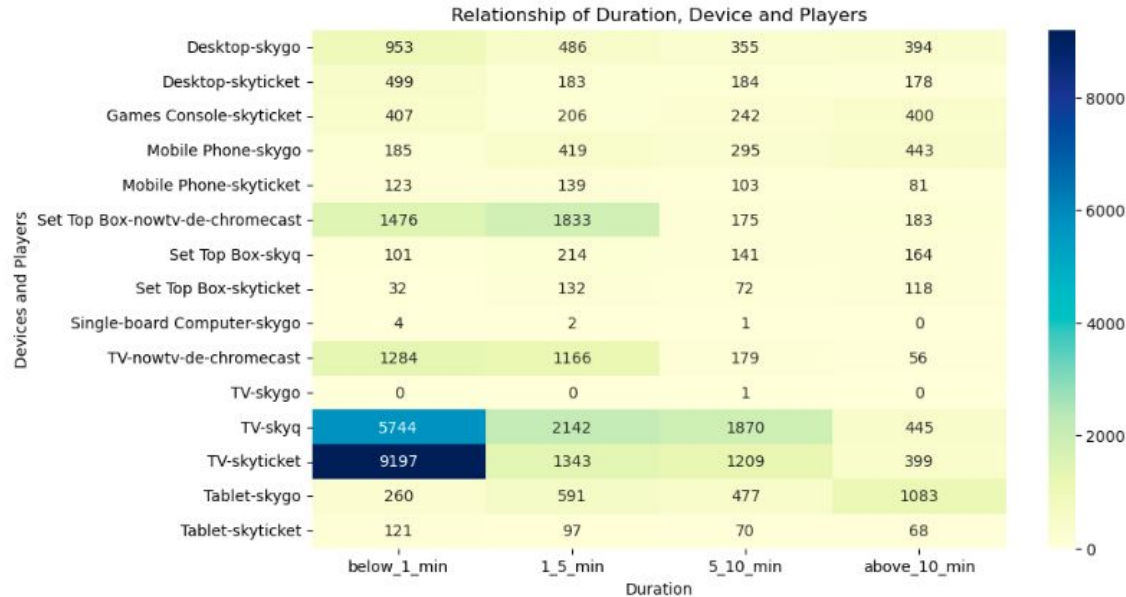
Players and Devices

Skyq and skyticket are most popular for TVs while Chromecast is most popular for Set Top Box.



Duration vs Players and Devices

- Among the lower durations: the popular combinations of Devices and Operating systems are: TV-Skyticket, TV-Skyq and Set Top Box - Chromecast
- Among the longer durations: the popular combinations of Devices and Operating systems is Tablet- Skygo



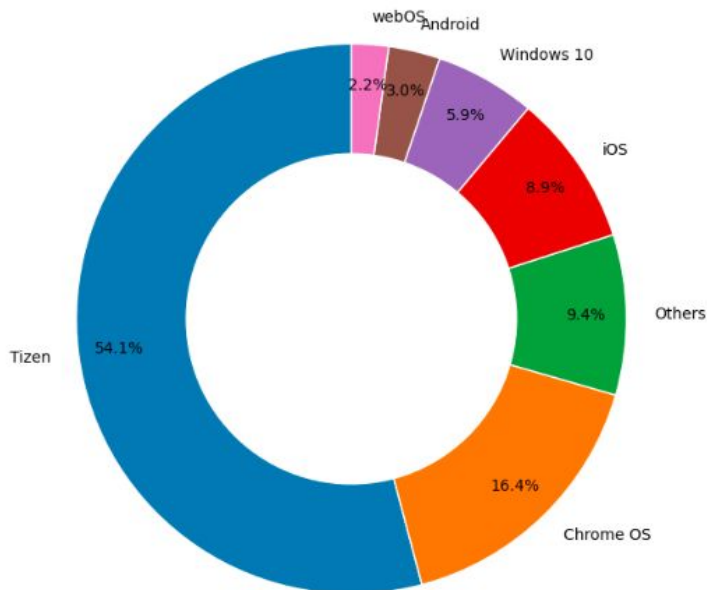


Conclusion

- Based on different features we can locate the issues
- TV-Tizen, Set Top Box- Android and Desktop-Windows are most popular combinations of devices and operating systems
- TV-Skyticket, TV-Skyq and Set Top Box - Chromecast are most popular combinations of devices and players

Operating systems and Internet service providers

Distribution of Device operating systems



Distribution of Internet service providers

