

Registered and casual bike rental users follow a daily routine, but take less trips as weather conditions worsen

- Clustering the registered-casual user activities within different weather conditions reveals that different user conditions don't affect these patterns of usage across the hours of the day.
- During early morning and late night, there are both registered and casual users who don't use the service much. From around 7 o'clock in the morning until late evening, more casual users are engaged in bike renting. Registered users are especially active 15 o'clock to 20 o'clock.
- While the patterns of bike usage are invariant under weather conditions, the number of registered and casual users varies significantly by four orders of magnitude from just a handful of users during heavy rain and snow, to millions of registered bike usages and hundreds of thousands of casual usages during clear weather conditions.
- This suggests that people integrate bike usage into their daily routine, but progressively switch to alternatives as weather conditions worsen. This finding has implications for calibrating the number of available bikes in shops according to the weather conditions.

