Seoul Bike Rentals

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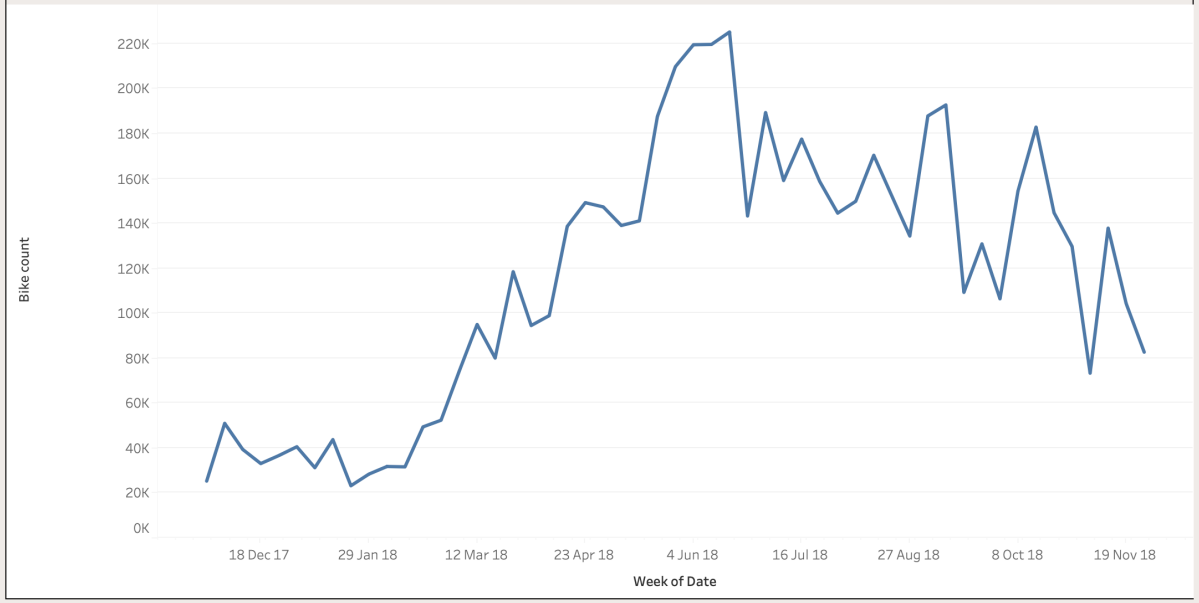
Executive Overview – Bike Rentals

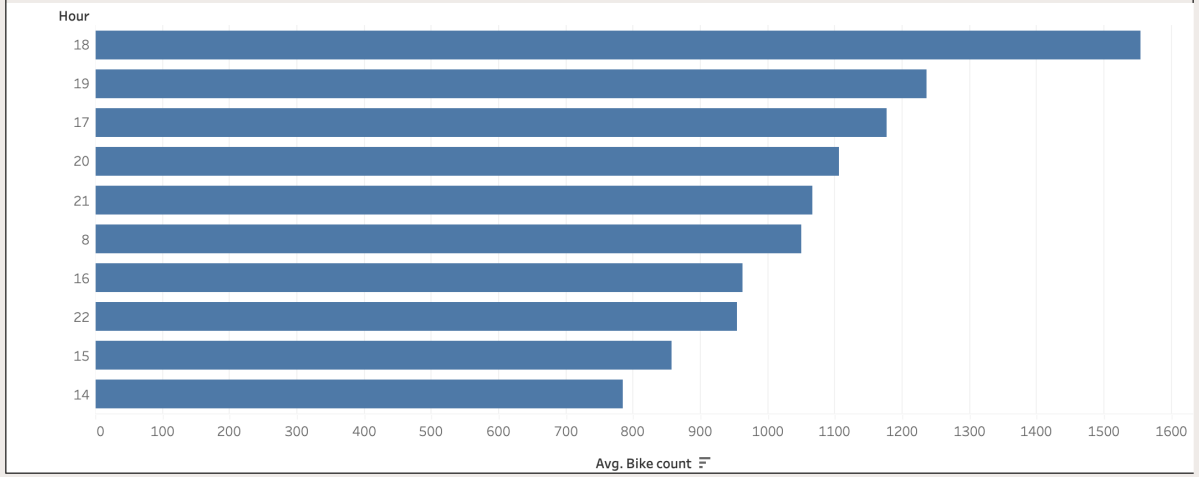
Total Rentals	Avg Daily Rentals	Peak Hour	
6,2M	17.485	18:00	Workday 70.0% | Non-Workday 30.0%

Date
27 November 2017 to 26 November 2018

Rental Trend



TOP 10 PEAK HOUR RENTALS



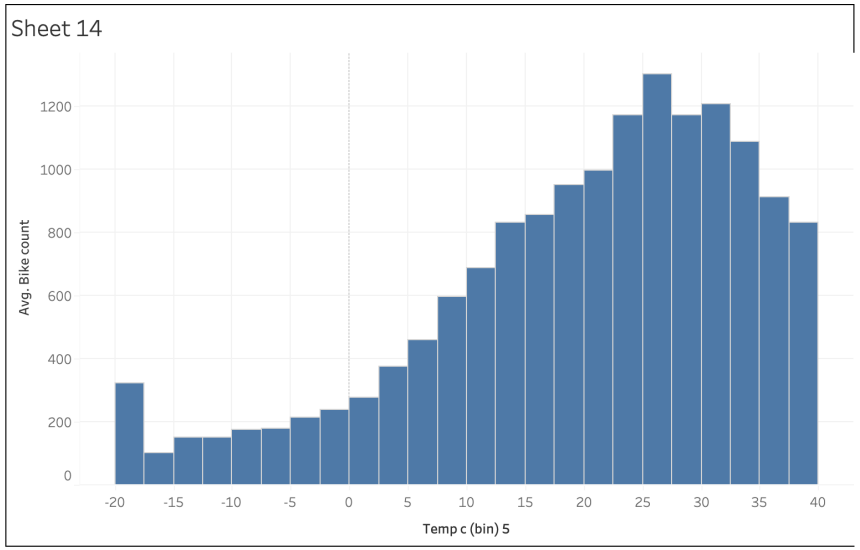
Executive Insights

- Total rentals: 6.2M (avg. 17.5K/day)
- Peak usage:18:00 (evening commute), with strong morning demand at 08:00
- Workdays account for 70% of rentals, Non-workdays 30%
- Clear seasonality: rentals climb steadily from January → peak in June (>220K/week), then decline into autumn
- High demand aligns with commuter patterns, reinforcing weekday utility focus
- Weekend share indicates steady leisure/recreational usage

Actionable Notes:

- Align bike availability and maintenance with peak commuter hours (08:00 & 18:00)
- Plan capacity and promotions around seasonal highs (summer) and lows (autumn/winter)
- Consider targeted campaigns for non-workday riders to expand leisure/recreation usage
- Monitor weather-driven demand to adjst. fleet distribution dynamically

Weather & Demand Analysis



Temperature

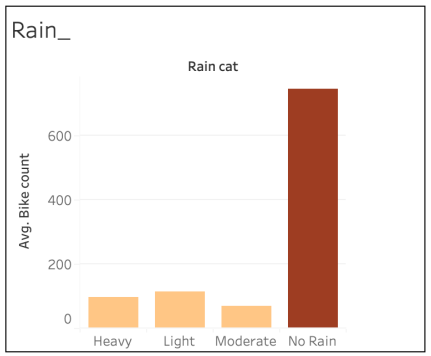
=> Rentals peak at **15–27.5°C**; below 0°C or above 32°C, usage drops sharply.
=> Extreme cold morning spike exists for workday commuters (-20 to -17.5°C).

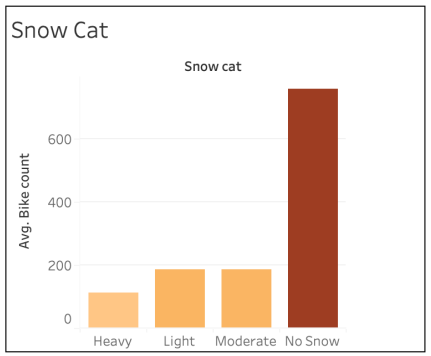
Rain

=> Rentals drop **~85–90%** from no rain (~747) to light/moderate rain (~67–114).
=> **Rain has the strongest negative impact** on bike usage.

Snow

=> Rentals drop **~75–85%** from no snow (~759) to moderate/heavy snow (~112–187).
=> Snow significantly reduces daily bike usage, especially for commuting.



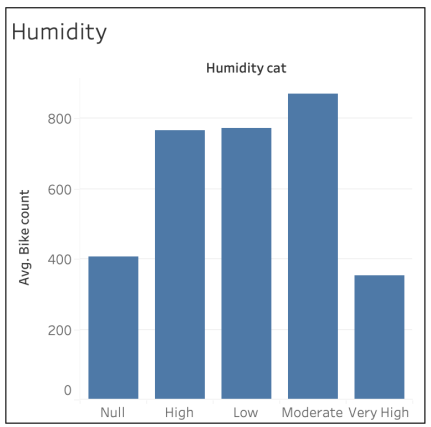


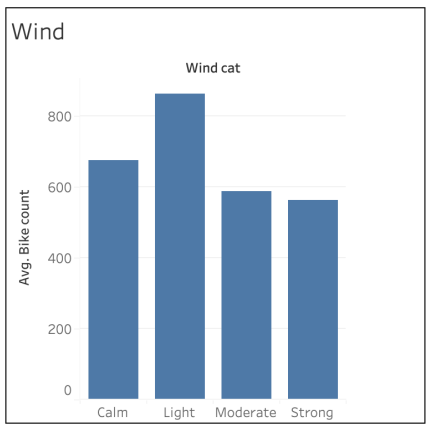
Humidity

=> Moderate humidity drives highest rentals (~871); very high humidity reduces usage **~50–60%**.

Wind

=> Calm/light winds maximize rentals (~864); strong winds reduce rentals **~35%**.





Actionables

✓ Scale fleet & staff dynamically with weather forecasts (expand in optimal, reduce in rain/snow/extremes).
✓ Use **push notifications & promotions** on good weather days to boost rides.
✓ Provide **safety tips & alternate options** during rain, snow, or strong winds.
✓ Schedule **maintenance during low-demand windows** (rain/snow/extreme temps).
✓ Maintain minimal fleet for **essential early-morning cold commuters**.

Avg. Bike count
111.7 759.0

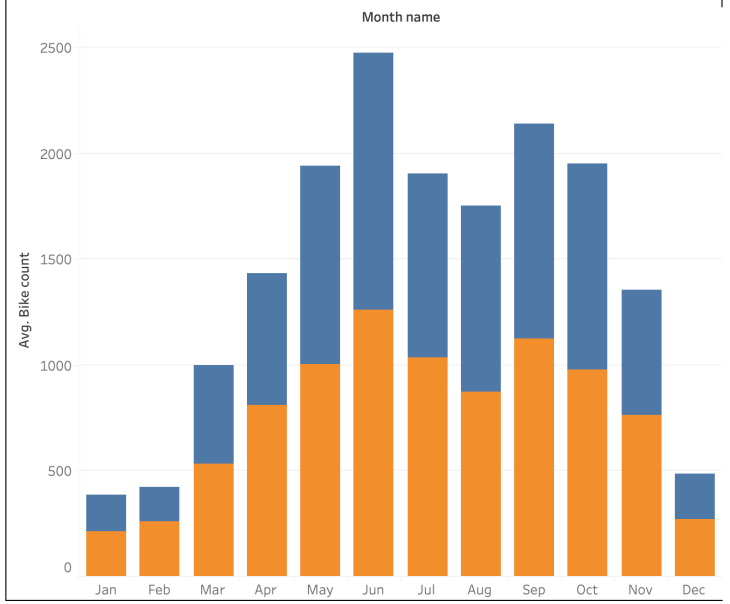
Seasons
- [x] Autumn
- [x] Spring
- [x] Summer
- [x] Winter

Hour
0 to 23

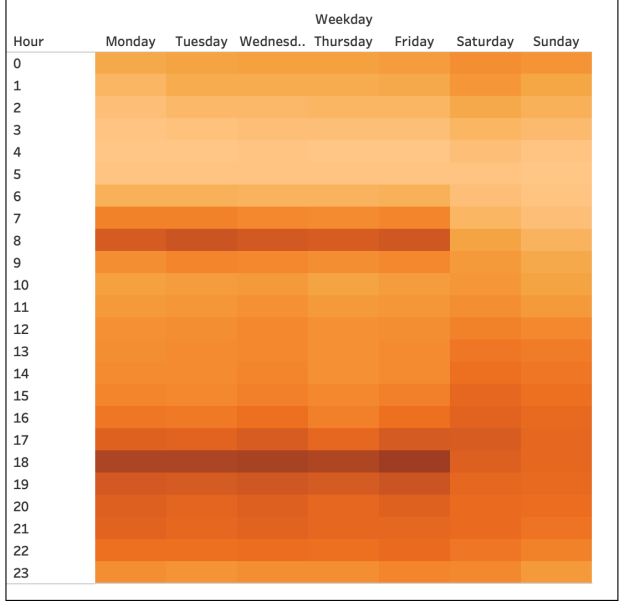
Work Day
- [x] False
- [x] True

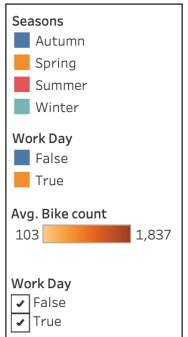
Exploring how demand shifts by month, weekday, and season

Monthly Rentals

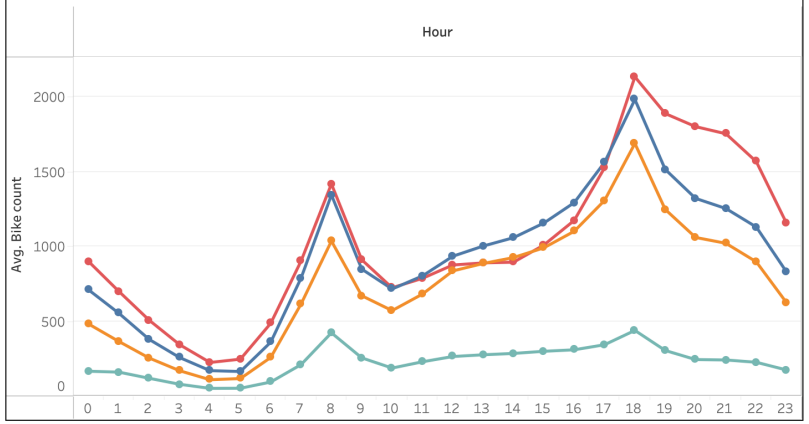


Heatmap Hour x Weekday





Hourly Rentals by Season



Season Share (Donut Chart)

Tableau can't export Viz Extensions.

📊 Insights

🚲 Rentals rise sharply from winter (~200/day) to summer/autumn (>1,200/day).
📆 Workdays consistently have higher demand than weekends (~20–25% more).
🕗 Weekday peaks at **7– 9 AM & 5–7 PM** (commute hours); weekends peak midday.
🌞 Summer evenings see the strongest demand (~2,100 rentals/hour at 6–8 PM).
🍂 Autumn and Spring show balanced commuter + leisure usage; Winter is lowest.

🛠️ Actionables

🔧 Add fleet capacity in **summer & early autumn**, reduce in winter.
🕒 Rebalance bikes **10 AM–3 PM** to prep for evening rush.
👔 Promote commuter passes for weekdays; 🎉 leisure/day-trip offers on weekends.
⚡ Use winter downtime for **maintenance & redistribution**.
📈 Budget and staffing should scale up in summer, scale down in winter.