

# Market Insights & Financial Modelling Project

## Casual Rider Conversion Analysis

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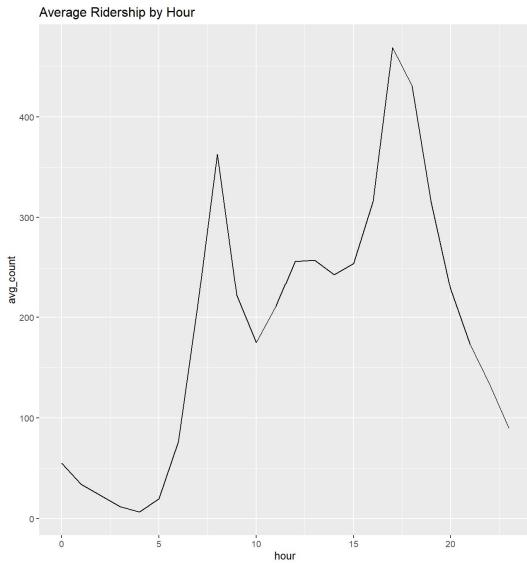
**Tools:** R • Excel • Data Visualization

### Goal

The goal of this analysis is to understand usage patterns of casual vs. registered riders and identify opportunities to convert casual riders into subscribers, thereby increasing predictable revenue.

# R Analysis & Key Plots

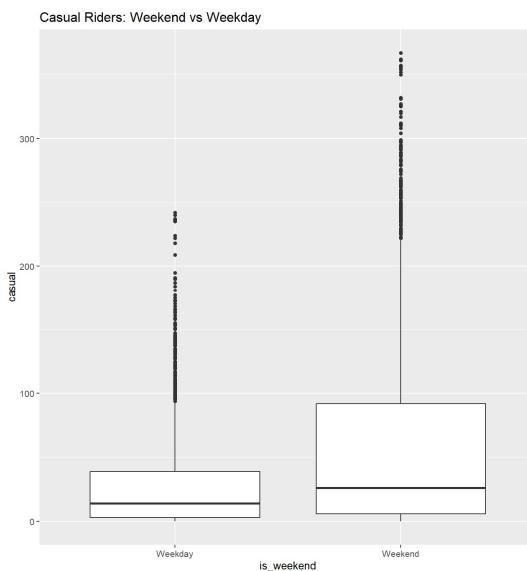
## Average Ridership per Hour



### Insights:

Casual bike usage peaks during daytime hours on non-working days.

Registered riders dominate weekday morning and evening commute hours.



### Insights:

Casual riders primarily use bikes on weekends.

Strong recreational usage pattern compared to weekday commuters.

## Key Business Insights from R Analysis

- Casual riders represent a high-potential segment for subscription conversion, particularly during weekends.
- Targeted weekend marketing campaigns could increase subscription revenue.
- Weekday commuter trends indicate retention strategies for registered riders.

*These insights form the assumptions for the Excel financial model.*

# Excel Financial Model

## Assumptions (based on R insights)

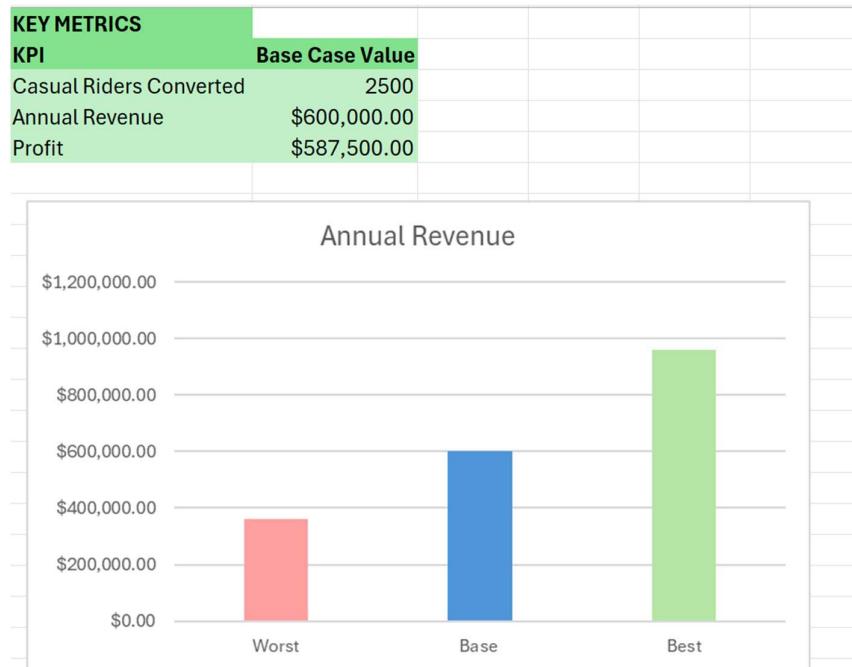
Variable	Value
Casual Riders	50,000
Conversion Rate	5%
Monthly Subscriptions	\$20
Marketing Cost Per User	\$5
Churn Rate	10%

## Revenue & Profit Calculations:

- New subscribers = Casual riders × Conversion rate
- Annual revenue = New subscribers × Monthly subscription × 12
- Profit = Annual revenue – (Marketing cost × New subscribers)

## Scenario Analysis:

- **Worst Case:** 3% conversion
- **Base Case:** 5% conversion
- **Best Case:** 8% conversion



**Recommendation:** Focus marketing campaigns on weekend casual riders. Projected 5% conversion leads to an increase of \$600,000 in annual revenue, with approximately 2500 new subscribers. Scenario analysis shows potential revenue ranging from \$360,000 (Worst case) to \$960,000 (Best case), with corresponding subscriber numbers from 1500 to 4000. This data supports targeted promotional efforts to maximize revenue and subscriber growth.

## Final Recommendations

### Strategic Recommendation:

- Focus marketing campaigns on weekend casual riders.
- Offer first-month discounts or trial subscriptions to convert casual riders.
- Monitor conversion rates and adjust marketing spend to maximize revenue.

### Expected Outcome:

- Projected revenue increase proportional to conversion rates.
- Retention strategies for registered riders maintain steady recurring revenue.

### Next Steps and Risks:

- Track engagement metrics post-campaign.
- Adjust subscription incentives if churn rises.
- Explore weekday casual rider promotions as secondary growth opportunity.