

BOLT DATA ANALYTICS REPORT

Ride-Hailing Demand-Supply Optimization

Scope: 839 hourly observations over 5 weeks

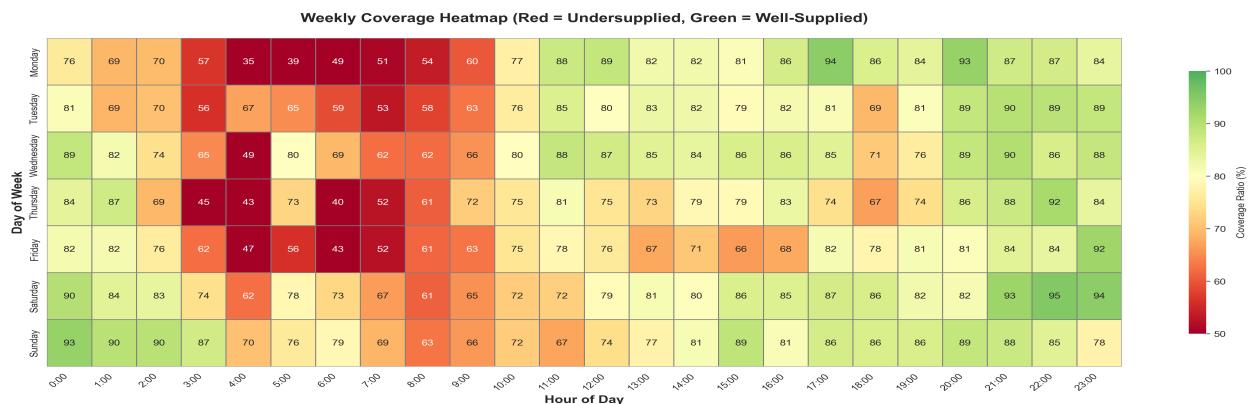
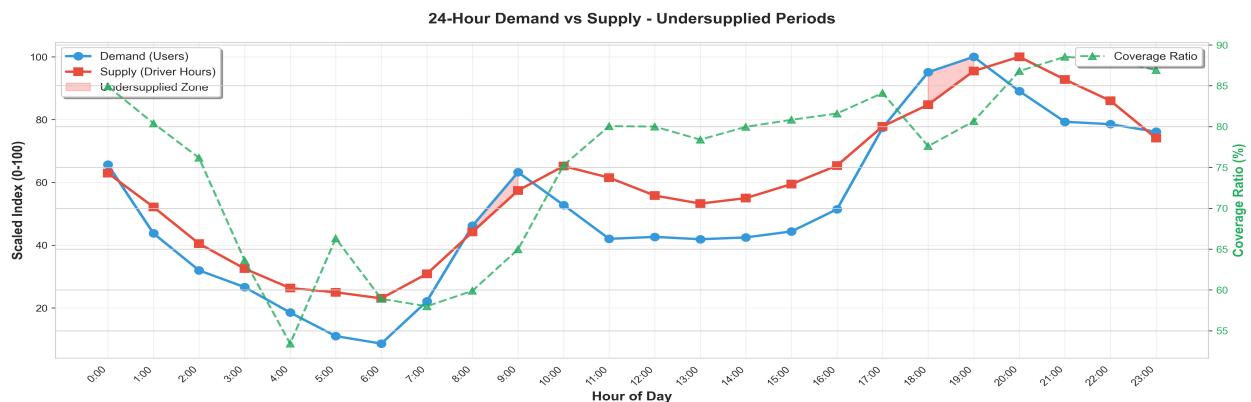
EXECUTIVE SUMMARY

Coverage averages 75.7%, below the 85% target. Undersupply concentrates in early mornings (4-7 AM) and evening peaks (6-9 PM) on weekdays. 123 hour-day periods fall below target; reaching 85% requires 397 additional driver hours (+15.9% vs current undersupplied hours). A EUR 5.54/hour earnings guarantee is recommended; expected cost EUR 287, revenue uplift EUR 10,214, ROI 3,455%.

DEMAND-SUPPLY STATE

Worst coverage: Monday 4 AM at 35%. Best day: Sunday at 80%. Supply peaks lag demand by ~1 hour (demand 19:00, supply 20:00). Weekday commutes drive undersupply; weekends fare better but remain below 85%.

Critical windows: 4-7 AM and 6-9 PM on weekdays.



CAPACITY REQUIRED

Additional driver hours needed: 397 (+15.9% vs current undersupplied hours).

Severity breakdown: Severe 95h (24%), Moderate 205h (52%), Mild 97h (24%). Prioritize moderate for ROI, then severe, then mild.

EARNINGS GUARANTEE

Current: 0.60 rides/hour; driver earnings EUR 4.82/hour; EUR 8.00/ride to driver (80% of EUR 10). Missed demand: 12.2 users/hour see zero cars; assuming 70% capture, 30% conversion → 2.57 rides/hour potential.

Recommendation: EUR 5.54/hour guarantee (+15%). Cost EUR 287 applied to 397 hours; revenue uplift EUR 10,214; ROI 3,455%.

Why it works: Low cost, high upside; aligns driver incentives to peak undersupply; leverages existing demand without discounting riders.

PROGRAM ECONOMICS

Metric	Value
Subsidy per hour	EUR 0.72
Apply to hours	397
Program cost	EUR 287
Captured rides	1,020
Gross revenue	EUR 10,214
Net benefit	EUR 9,927
ROI	3,455%

RECOMMENDATIONS

- 1) Launch EUR 5.54/hour guarantee for 4-7 AM and 6-9 PM on weekdays.
- 2) Allocate first 205 hours to moderate gaps, then 95 severe, then 97 mild.
- 3) Track coverage, subsidy/hour, driver participation, and 'no cars' complaints daily; adjust bi-weekly.
- 4) Communicate via driver app pushes with 2-hour minimum session during guarantees.

SUCCESS CRITERIA (6 WEEKS)

- Coverage $\geq 85\%$ in 90% of guaranteed hours
- Subsidy payout $< 50\%$ of gross revenue captured
- Driver participation $\geq 40\%$ in guarantee windows
- 'No cars' complaints down $\geq 60\%$

FILES

Bolt_Analysis.ipynb (analysis notebook); Demand_Supply_24h.png; Coverage_Heatmap.png;
Summary_Dashboard.png; README.md; requirements.txt