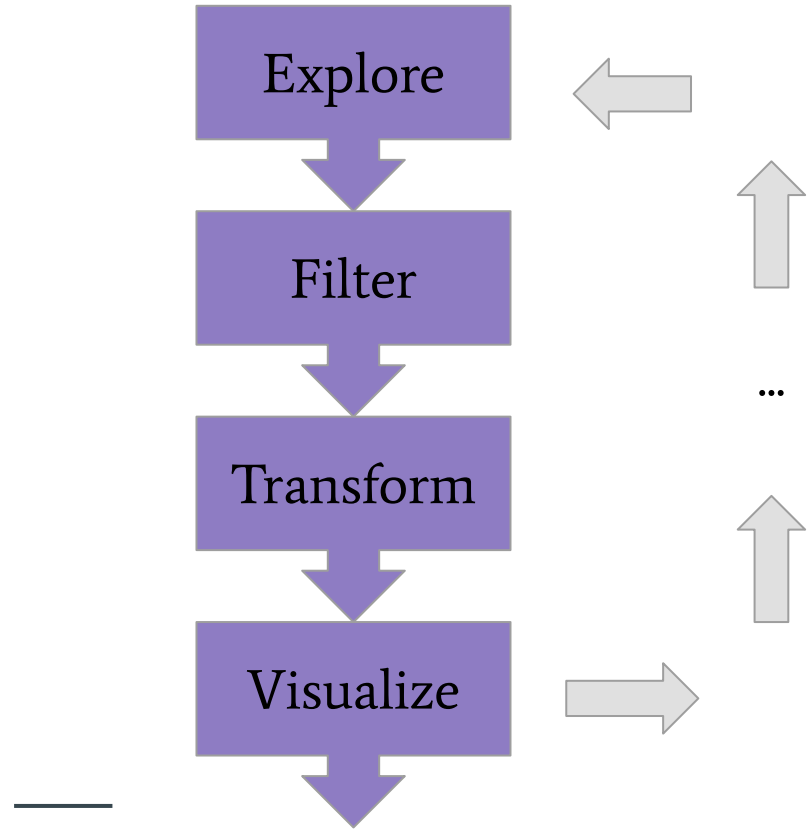


Booster Fuels Case Study

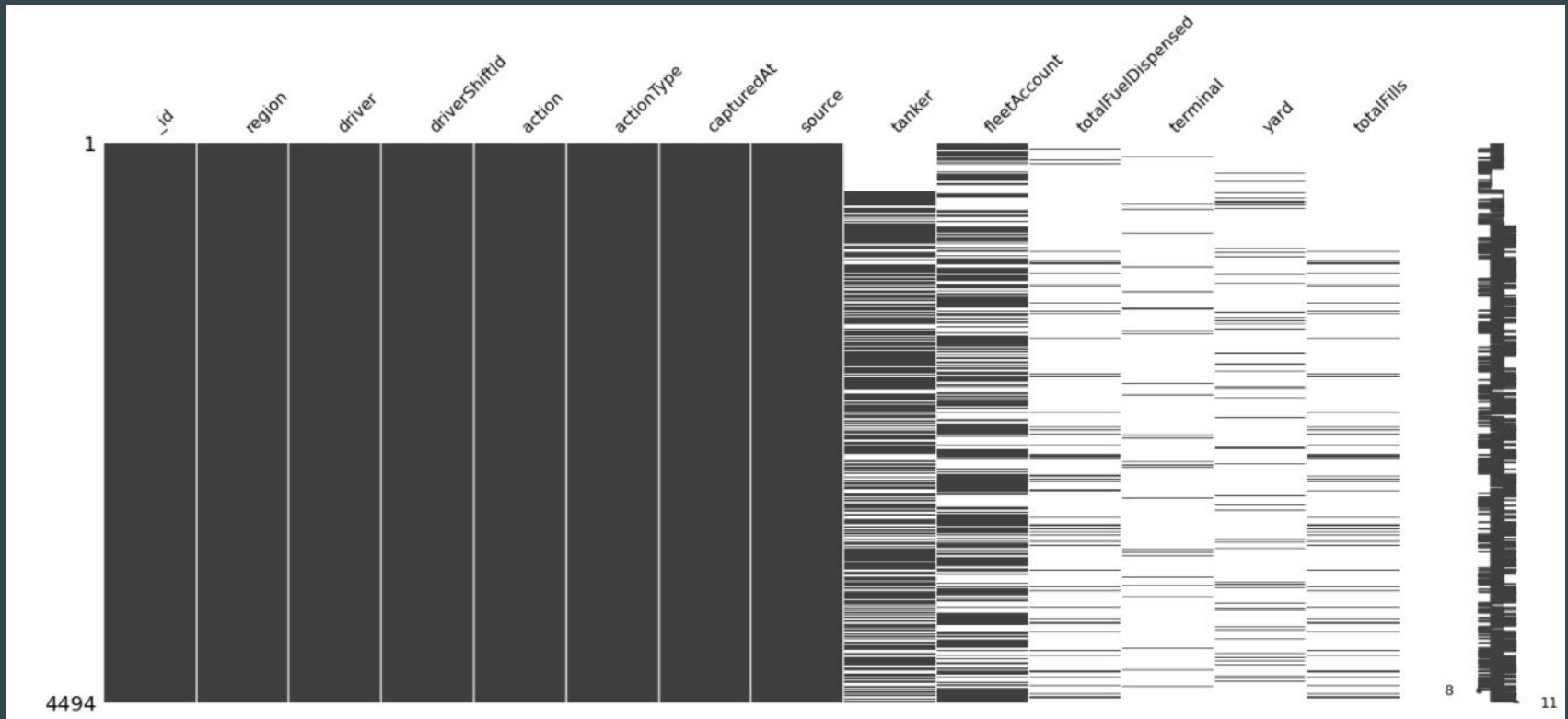


Magnus Skonberg
June 10th 2021

Approach & Early Findings



Early Findings: Manual Entry is a Problem



Early Findings: Filter for Events to Derive States

Sequence Filtering

Events

A: Deputy | Shift | Start
 B: Fleetio | Pre Trip | Start
 C: Fleetio | Pre Trip | End
 D: Pangolier | Yard | End
 E: Pangolier | Fleet | Start
 F: Wilson | Delivery | Start
 G: Wilson | Delivery | End
 H: Pangolier | Fleet | End
 I: Pangolier | Terminal | Start
 J: Pangolier | Terminal | End
 K: Deputy | Lunch | Start
 L: Deputy | Lunch | End
 M: Pangolier | Yard | Start
 N: Fleetio | Post Trip | Start
 O: Fleetio | Post Trip | End
 P: Deputy | Shift | End



	driverShiftId	Event Sequence	Complete
14	5f4704cc2e88a7001230387c	ABCDEHEHEHIJEHMNONOP	True
27	5f4858b4f49554001363bc26	ABCDIJEHEHIJMNONOP	True
30	5f4999ce2404c6001212d231	ABCDEHEHEHMNONOP	True
41	5f4af8f0786b0800122ea779	ABCDEHEHMNONOP	True
52	5f4c4d702404c6001212de79	ABCDIJKLEHEHMNONOP	True
72	5f5030d84a89d40012bf41b6	ABCDEFGHGFEGHGFHEFHEHGM...	True
77	5f503f5e680c490012bb19e2	ABCDFEHIJEGHMNONOP	True
78	5f50407a4a89d40012bf471d	ABCDEFGHGFEGHGMNONOP	True
79	5f5043184a89d40012bf4759	ABCDIJEFHGMNONOP	True
85	5f5190712ede7d00127bb02b	ABCDFEHIJEGHMNONOP	True
86	5f51907c2ede7d00127bb037	ABCDIJEFGHGFEGHIJMNONOP	True
96	5f52e2eca36e930012d28442	ABCDIJEFGHMNONOP	True
97	5f52e5cca36e930012d28491	ABCDIJEHFEIGHIJMNONOP	True
109	5f558533a36e930012d29b7c	ABCDFEFGHIJMNONOP	True
113	5f56c41da36e930012d2a622	ABCDIJEFHGFEGHGFHGFEGH...	True
116	5f56d671a36e930012d2a6cd	ABCDIJEFGHIJMNONOP	True
125	5f5827ee2ede7d00127bf6eb	ABCDEFGHGFHIJEGHMNONOP	True
126	5f58287fa36e930012d2b7cb	ABCDIJEFEHGHIMNONOP	True
135	5f59798a094f9b0012abaf43	ABCDIJIJEFEGHFGHMNONOP	True
144	5f5abe4782bfae001416cdc5	ABCDEFGHGFHGFEGHEEGFHHG...	True
155	5f5c1c898dcf9200146c916b	ABCDFIJEGHMNONOP	True
160	5f5d5ff58dcf9200146c9ce5	ABCDFEHEHGEHEFGHGFHGFEG...	True
169	5f5ebf758dcf9200146ca638	ABCDEFGHGFHIJEGHMNONOP	True



States

Shift: A | P
 Pre: B | C
 On Site: E | H
 Delivery: F | G
 Terminal: I | J
 Lunch: K | L
 Yard: M | N
 Post: N | O
 Transit: D, H, J, L | E, I, K, M

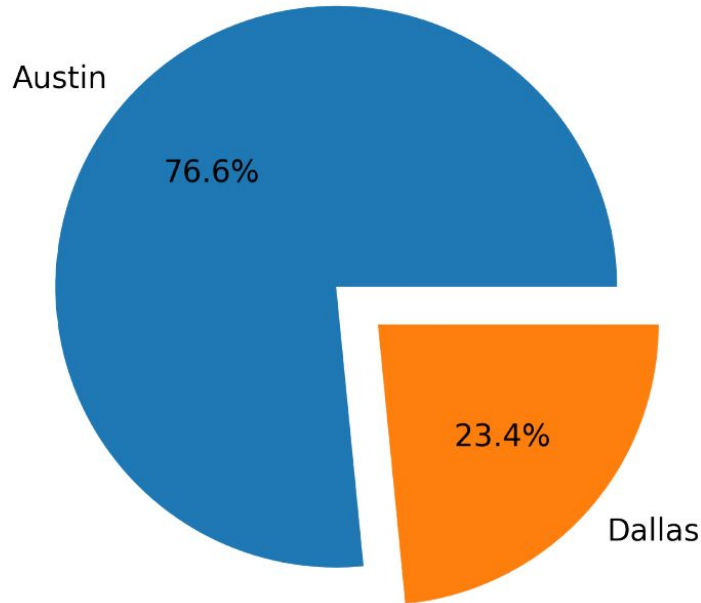
Assumptions

1. Sequencing matters.
2. State assignment is accurate.
3. Transit is “everything between”.

Visualizations I & II

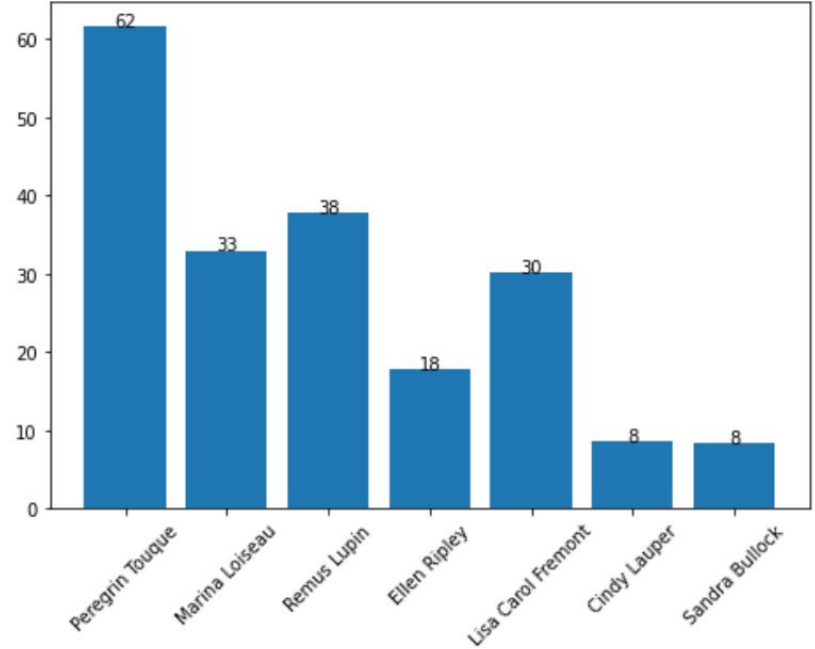
I: Austin > Dallas Fort Worth

Properly Logged Shift Hours Based on Region



II: Highlight “bright spot” drivers

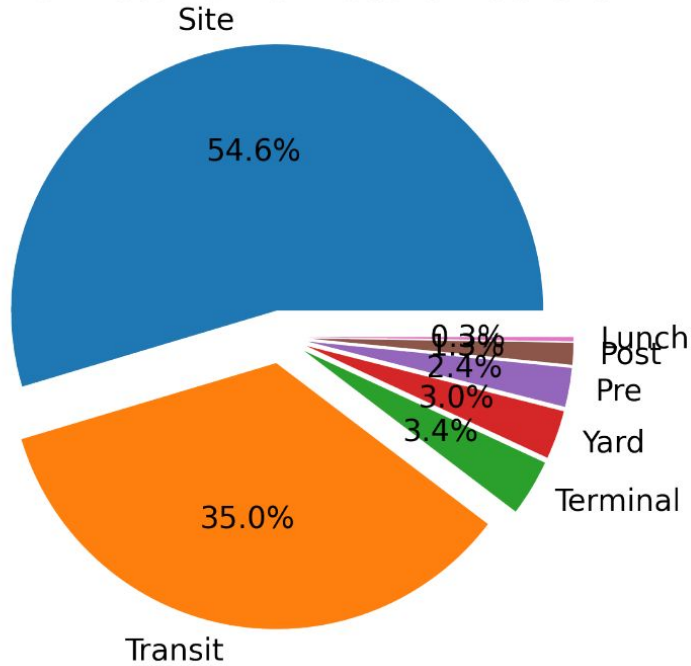
Properly Logged Shift Hours Based on Driver



Visualizations III & IV

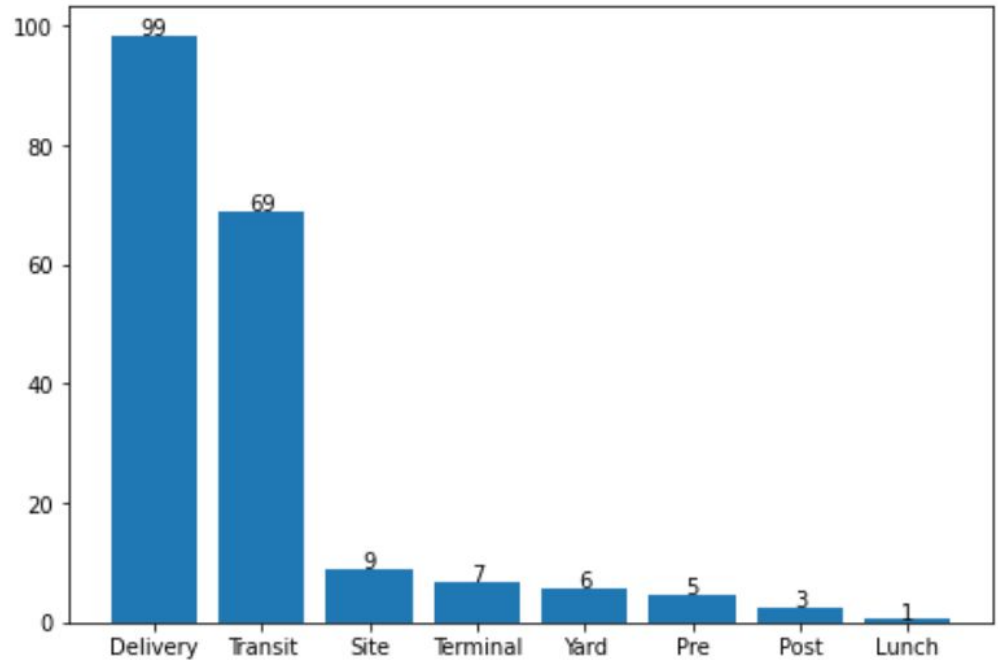
III: ~90% of time on Site and in Transit

Time Allocation for Booster Fuel SPs



IV: Minimize Time in Transit, Downtime, and Refueling Trips

Time Allocation for Booster Fuel SPs



Summary / Conclusion

Patterns & Learnings

- Manual entry is a problem
- Austin > Dallas Fort Worth
- “Lunch” (least), “Delivery” and “Transit” (most)

Suggestions

- Reward “bright spot” drivers
 - Refuel at start/end of shift
 - Minimize downtime and time spent in transit
-

“What gets measured gets managed.”
Peter Drucker

Conclusion



Questions