**Data Analysis**

**Variables**

Variables from BTS data:

* Carrier Code
* Date (MM/DD/YYYY)
* Flight Number
* Departure delay (Minutes)
* Wheels-off time
* Delay Carrier (Minutes)
* Delay Weather (Minutes)
* Delay National Aviation System (Minutes)
* Delay Security (Minutes)
* Delay Late Aircraft Arrival (Minutes)

Derived variables

* delayed flights per month per carrier per airport
* cancelled flights per month per carrier per airport

Financial variables – 1st check Yahoo Finance

* Weekly airline book value (or asset value)
* Weekly airline stock value
* Monthly data is probably fine but Tableau reports with weekly data would be more aesthetically pleasing
* Possibly use revenue, profit, assets, and market cap

**Choosing Airlines**

(Information to help with choosing airports and airlines is in an Information section below this Notes section)

Suggest choosing 6 airlines (or more) – 6 b/c there are 3 majors and having 3 additional airlines would allow for further analytics, additional models

* Large
  + Delta
  + American
  + United
* Other
  + Southwest
  + Frontier
  + JetBlue

**Choosing Airports**

Suggest choosing 6 (or more) airports – 3 US airports are slot controlled; hubs are arguably important too. 2021 Passengers per year rank in (parenthesis) from Wiki. An airport is level 1, 2, or 3 with 3 being slot controlled. Should we try for all 6 airline hubs? Will possibly add analytics capabilities.

* Level 1
  + JFK (13)
  + LGA (25)
  + DCA (30)
* Big/hub – probably Level 2 but need to check also not hubs for “Other airlines”
  + ATL (1)
  + DFW (2)
  + DEN (3)
  + LAX (5)
  + BOS (19)
  + CLT (6)
  + ORD (4)
  + BOS (19)
  + DTW (18)
  + MSP (16)
  + SLC (20)
  + SEA (11)
* Non-hub Florida - having problems from the FAA “helping” article
  + MCO (7)
  + MIA (10)

Information to help choose airlines and airports:

US Hubs:

* United
  + ORD
  + DEN
  + IAH
  + LAX
* American
  + BOS
  + CLT
  + ORD
  + DFW
* Delta
  + ATL
  + BOS
  + DTW
  + LAX
  + MSP
  + JFK
  + LGA
  + SLC
  + SEA
* Need Southwest, Frontier, JetBlue

NerdWallet (9/8/22)

Table

Description automatically generated

Travel Pulse (7/17/22)

Table

Description automatically generated