**Fairing Null Handling, Cleaning, Adding Financial Columns**

* Tool choice = Excel
* Reasoning = only 90 rows total, relatively few null values, ElonX tables do not have class or id, API is internal

Fairings

* Open api\_fairings.csv in Excel
* Filter TRUE, enter 1
* Filter FALSE, enter 0
* Filter for blank values
  + 3/30/2017 was the first recovery of fairings,
  + 11/11/2019 was the first use of recovered fairings
    - Date before 11/11/2019 = 0
  + Match dates with <https://www.elonx.net/fairing-recovery-attempts/>
    - ElonX r/SpaceX source (which is SpaceX REST API source)
  + Under Type column
    - ♺ = reused
    - No ♺ = new fairings
  + Record findings in ReusedFairings column
    - Reused = 1
    - New = 0

**Merge**

* Sort api\_fairings.csv FlightNumber
* Sort spacex.csv FlightNumber
* Copy paste ReusedFairings into spacex

**Additional Cleaning**

* For columns: GridFins, Legs, ReusedCore
* Filter TRUE
  + Enter 1
* Filter FALSE
  + Enter 0
* Delete column: LandingPad

**Financial Columns**

* To spacex.csv
* Add Columns: CostCoreMil CostFairingsMil CostOtherMil CostKgMil CostTotalMil RevenueReuseMil RevenueKgMil RevenueTotalMil ProfitMil – see flow diagram
* Delete launch/landing columns except: Date, FlightNumber, Class, ReusedCore, ReusedFairings, PayloadMass – save as spacex\_financials.csv