**Data Cleaning & Preparation**  
**Call Center Service Requests | Kansas City (2007–Mar 2021)**

Below is a concise yet comprehensive outline of the 11-step ETL cleaning process implemented in Alteryx, demonstrating technical precision and business relevance.

A diagram of a computer program

AI-generated content may be incorrect.

1. **Data Ingestion & Field Sizing**
   * **Tool**: Input Data + Auto Field
   * **Action**: Loaded raw TSV data and auto-detected optimal data types and field sizes for all columns.
   * **Impact**: Ensured performant, schema-accurate processing from the outset.
2. **Field Selection & Renaming**
   * **Tool**: Select
   * **Action**: Removed irrelevant fields and prepared a streamlined schema for downstream analysis.  
     *(No renames were applied beyond pruning unused columns.)*
3. **Audit Trail Enrichment**
   * **Tool**: Formula (User\_Name)
   * **Action**: Created a User\_Name field via GetEnvironmentVariable("USERNAME").  
     *(Captures the operator executing the workflow.)*
4. **Load Timestamp Generation**
   * **Tool**: Formula (Load\_Date)
   * **Action**: Added Load\_Date field using DateTimeNow().  
     *(Stamps each record with execution timestamp for traceability.)*
5. **Dataset Previews**
   * **Tool**: Browse (×3)
   * **Action**: Interactively inspected the data at three critical junctures—post-ingestion, post-user audit, and post-timestamp—to validate transformations.
6. **Categorical Cleanup**
   * **Tool**: Formula
   * **Actions & Expressions**:
   * **Work\_Group**: IF RIGHT([Work\_Group],1)="-" THEN LEFT([Work\_Group],LENGTH([Work\_Group])-1) ELSE [Work\_Group] ENDIF  
     *(Removes trailing hyphens.)*
   * **Status**: IF [Status]="Resol" THEN "Resolved" ELSE [Status] ENDIF  
     *(Standardizes abbreviated statuses.)*
   * **Department**: IF Contains([Department],"Parks") AND NOT Contains([Department],"Parks & Rec") THEN "Parks & Recreation" ELSE [Department] ENDIF  
     *(Unifies park-related department names.)*  
     *(Result: Harmonized categorical values to support accurate segmentation.)*
7. **Null Handling – Numeric Fields**
   * **Tool**: Multi-Field Formula
   * **Expression**: IF IsNull([\_CurrentField\_]) THEN -1 ELSE [\_CurrentField\_] ENDIF  
     *(Replaces all missing numeric values with -1 to preserve row counts in aggregations.)*
8. **Null Handling – Text Fields**
   * **Tool**: Multi-Field Formula
   * **Expression**: IF IsNull([\_CurrentField\_]) THEN "Unknown" ELSE [\_CurrentField\_] ENDIF  
     *(Fills all empty text fields with "Unknown" to avoid gaps in categorical analyses.)*
9. **Final Validation**
   * **Tool**: Browse
   * **Action**: Conducted a last interactive review of the fully transformed dataset.  
     *(Confirmed correct application of all cleaning rules.)*
10. **Export to Downstream Systems**
    * **Action**: Published the cleaned dataset to MySQL, creating a reliable source for Tableau dashboard data feeds.
11. **Business Impact**
    * **Outcome**: Delivered a fully audit-ready dataset with consistent schema, enabling executive-level dashboards to accurately track monthly trends and resolution rates.

*This structured cleaning framework underscores my ability to implement end-to-end ETL processes that align with both technical rigor and business reporting needs.*