

```

import pandas as pd

(df_raw = pd.read_csv("day15_real_dataset_large.csv

: (def clean_data_project(df_raw
    ()df = df_raw.copy
        Types #
    ("df["age"] = pd.to_numeric(df["age"], errors="coerce
        , ["df["income"] = pd.to_numeric(df["income
            ("errors="coerce
    , ["df["signup_time"] = pd.to_datetime(df["signup_time
        ("errors="coerce

        Missing #
        (df["age_missing"] = df["age"].isna().astype(int
        ()df["age"] = df["age"].fillna(df["age"].median
        (df["income_missing"] = df["income"].isna().astype(int
        ()df["income"] = df["income"].fillna(df["income"].median
        Outliers #
        df["income"] =
        ((df["income"].clip(upper=df["income"].quantile(0.99
        Strings and dates #
        ()df["city"] = df["city"].str.strip().str.lower
    ("df["signup_time"] = df["signup_time"].dt.tz_localize("UTC
        return df

    } = cleaning_decisions
    income_cap_99": "Cap income at 99th percentile to reduce"
    , ".influence of extreme values while keeping all records
    age_median_imp": "Impute missing age with global median; less"
    ".sensitive to outliers than mean
    {
        (print(cleaning_decisions
        (df_clean = clean_data_project(df_raw
        ()print(df_clean.info
        ()print(df_clean[["age", "income"]].describe
        ()print(df_clean["city"].value_counts().head
        (print(df_clean["signup_time"].dt.tz

```