

Handling categorical data

- Ratio data (`household_adult`, `household_children`) is perfect the way it is. No changes necessary.
- Ordinal data (except `age_group`, `education`, `income_poverty`) is perfect the way it is. No changes necessary.
- Ordinal data like `age_group` [18-34, 35-44, 45-54, 55-64, 65+], `education` [<12 Years, 12 Years, College Graduate, Some College], `income_poverty` [\leq \$75,000. Above poverty but below \$75,000. Above \$75,000] needs to be converted into regular numbers (0,1,2,3,...).
- Nominal data needs to be converted into regular numbers (0,1,2,3,...), and then one-hot encoded.
- Binary variables like `sex` [Male Female], `marital_status` [Married, Not Married] and `rent_or_own` [Own, Rent] need to be converted into regular numbers (0,1). Do binary variables need to be one-hot encoded?

Sep-2019: [How To Handle Ordinal Categories \(Ordinal Encoding\)](#) (Krish Naik)

- Ordinal encoding for `age_group`:

```
age_map = {
    '18 - 34 Years':1,
    '35 - 44 Years':2,
    '45 - 54 Years':3,
    '55 - 64 Years':4,
    '65+ Years':5
}

df['age_group_numerical'] = df.age_group.map(age_map)
```