Data source: <https://datapacks.censusdata.abs.gov.au/datapacks/> only NSW part

Please download NSW related data.

Project description:

Due to the data you have (year 2011 and 2016),

1. Build a model for each **feature (age, gender, weekly income, marriage state, area)** to predict the population in year 2021, 2025 and 2030, and Save the model.

Different catalogue could use different algorithm (due to the performance), no need to be too complex, but need a better accuracy.

\*please comment which feature use which algorithm (at least 3 different algorithms).

1. For each feature, use the model to predict each value’s population multiply by areas in Sydney, the values are showing below.

Save each feature’s prediction (with confidence interval) in a csv file, and save the mode’s performance (matrix would be good).

|  |  |
| --- | --- |
| **Feature** | **Values** |
| **Age (7)** | under18, 18-24, 25-34, 35-44, 45-54, 55-64, 65 and older |
| **Gender (2)** | Male, Female |
| **Weekly Income (6)** | 0-399, 400-799, 800-1249, 1250-1999, 2000-4000, 4000+ |
| **Marriage State (3)** | Married in a registered marriage, De facto, Not Married |
| **Area (17)** | **Sydney Areas Postcode Ranges**  [Blue Mountains](https://postcodez.com.au/postcodes/nsw/sydney/blue-mountains) 2572 - 2786  [Canterbury /Bankstown](https://postcodez.com.au/postcodes/nsw/sydney/canterbury-bankstown) 2131 - 2372  [Eastern Suburbs](https://postcodez.com.au/postcodes/nsw/sydney/eastern-suburbs) 2008 - 2036  [Hawkesbury](https://postcodez.com.au/postcodes/nsw/sydney/hawkesbury) 2081 - 2778  [Hills](https://postcodez.com.au/postcodes/nsw/sydney/hills) 2120 - 2768  [Inner West](https://postcodez.com.au/postcodes/nsw/sydney/inner-west) 2006 - 2372  [Liverpool /Fairfield](https://postcodez.com.au/postcodes/nsw/sydney/liverpool-fairfield) 2163 - 2566  [Lower North Shore](https://postcodez.com.au/postcodes/nsw/sydney/lower-north-shore) 2060 - 2111  [Macarthur /Camden](https://postcodez.com.au/postcodes/nsw/sydney/macarthur-camden) 2167 - 2574  [Northern Beaches](https://postcodez.com.au/postcodes/nsw/sydney/northern-beaches) 2084 - 2108  [Northern Suburbs](https://postcodez.com.au/postcodes/nsw/sydney/northern-suburbs) 2110 - 2126  [Parramatta](https://postcodez.com.au/postcodes/nsw/sydney/parramatta) 2115 - 2199  [St George](https://postcodez.com.au/postcodes/nsw/sydney/st-george) 2020 - 2223  [Sutherland](https://postcodez.com.au/postcodes/nsw/sydney/sutherland) 2173 - 2565  [Sydney City](https://postcodez.com.au/postcodes/nsw/sydney/sydney-city) 2000 - 2011  [Upper North Shore](https://postcodez.com.au/postcodes/nsw/sydney/upper-north-shore) 2064 - 2580  [Western Sydney](https://postcodez.com.au/postcodes/nsw/sydney/western-sydney) 2145 - 2770 |