

University of Glasgow
School of Mathematics and Statistics
Data Analytics MSc (ODL)

Project

Data Summary

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1 Data Summary

The data here presented contains:

- Electoral results for the Australian 2022 Federal Election.
- Census 2021 Results
- Other Statistical Information, retrieved by the {readabs} package.
- Sample meteorological data, collected by the {cropgrowdays} package.

2 Electoral Results

Electoral results are available on the Australian Electoral Commission's (AEC) Tally Room website (<https://results.aec.gov.au/27966/Website/HouseDefault-27966.htm>).

Data available shows the primary vote for every candidate in each polling station. As an example, table 1 presents the results for two polling stations in the federal electoral division (electorates, divisions) of Macnamara (in Melbourne). Table 2 shows an aggregate per party for the same electorate.

Table 1: Milestones

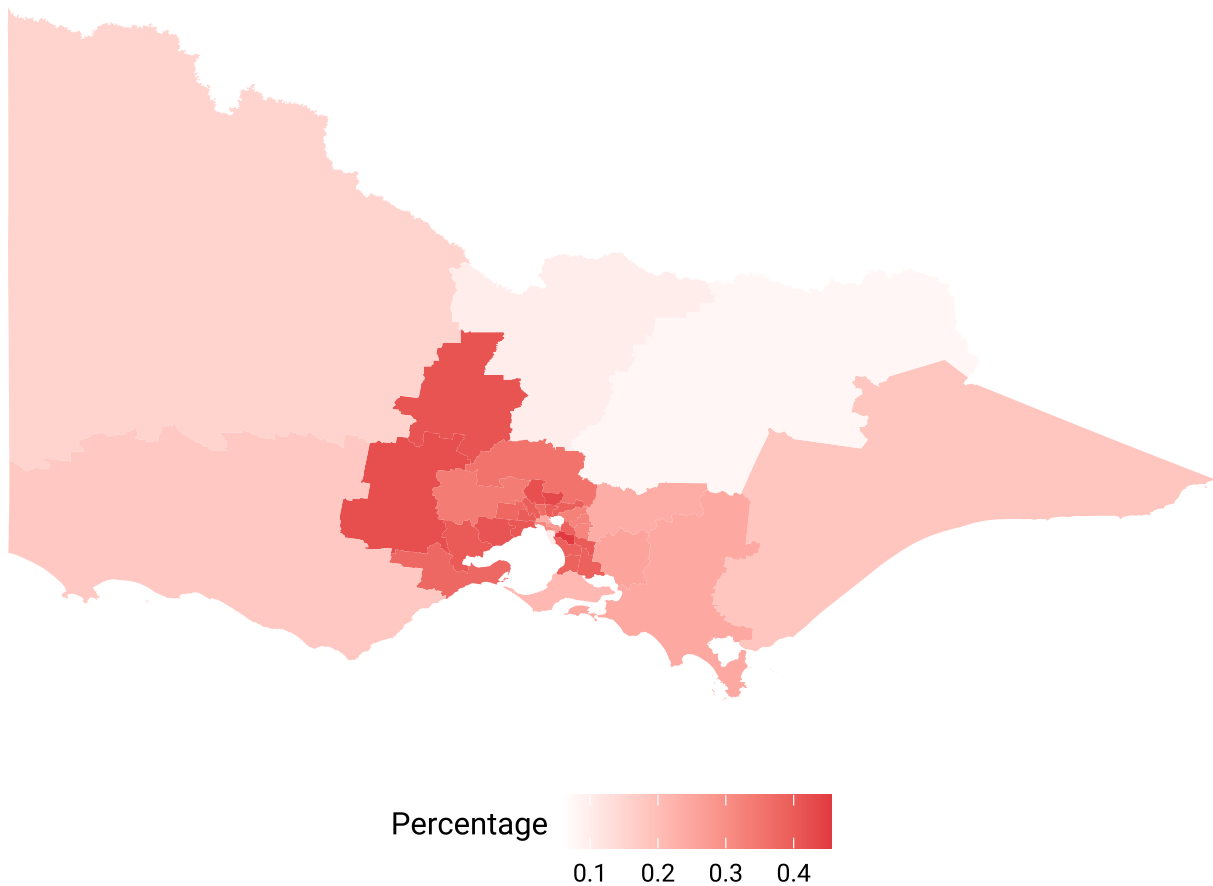
StateAb	DivisionID	DivisionNm	PollingPlaceID	PollingPlace	CandidateID	Surname	GivenNm	BallotPosition	Elected	HistoricElected	PartyAb	PartyNm	OrdinaryVotes	Swing
VIC	322	Macnamara	82955	Albert Park	37774	MYERS	John B	1	N	N	IND	Independent	19	2.20
VIC	322	Macnamara	82955	Albert Park	36736	HARKIN	Colleen	2	N	N	LP	Liberal	253	-6.08
VIC	322	Macnamara	82955	Albert Park	36436	BURNS	Josh	3	Y	Y	ALP	Australian Labor Party	246	0.09
VIC	322	Macnamara	82955	Albert Park	37779	ANNE	Debera	4	N	N	ON	Pauline Hanson's One Nation	23	2.66
VIC	322	Macnamara	82955	Albert Park	37007	McCATHIE	Rob	5	N	N	LDP	Liberal Democrats	23	2.66
VIC	322	Macnamara	82955	Albert Park	36693	SCHULTZ	Ben	6	N	N	AJP	Animal Justice Party	26	1.20
VIC	322	Macnamara	82955	Albert Park	36538	HODGINS-MAY	Steph	7	N	N	GRN	The Greens	265	1.28
VIC	322	Macnamara	82955	Albert Park	36020	HICKEY	Jane Elizabeth	8	N	N	UAPP	United Australia Party	10	-0.87
VIC	322	Macnamara	82955	Albert Park	999	Informal	Informal	999	N	N	NA	Informal	31	-0.47
VIC	322	Macnamara	4682	Alfred Square	37774	MYERS	John B	1	N	N	IND	Independent	22	2.02
VIC	322	Macnamara	4682	Alfred Square	36736	HARKIN	Colleen	2	N	N	LP	Liberal	163	-6.13
VIC	322	Macnamara	4682	Alfred Square	36436	BURNS	Josh	3	Y	Y	ALP	Australian Labor Party	382	-0.95
VIC	322	Macnamara	4682	Alfred Square	37779	ANNE	Debera	4	N	N	ON	Pauline Hanson's One Nation	21	1.93
VIC	322	Macnamara	4682	Alfred Square	37007	McCATHIE	Rob	5	N	N	LDP	Liberal Democrats	22	2.02
VIC	322	Macnamara	4682	Alfred Square	36693	SCHULTZ	Ben	6	N	N	AJP	Animal Justice Party	33	1.51
VIC	322	Macnamara	4682	Alfred Square	36538	HODGINS-MAY	Steph	7	N	N	GRN	The Greens	427	2.36
VIC	322	Macnamara	4682	Alfred Square	36020	HICKEY	Jane Elizabeth	8	N	N	UAPP	United Australia Party	17	0.12
VIC	322	Macnamara	4682	Alfred Square	999	Informal	Informal	999	N	N	NA	Informal	33	-1.43

Table 2: Milestones

DivisionNm	PartyNm	primary_vote	primary_perc
Macnamara	Australian Labor Party	20603	0.3115954
Macnamara	The Greens	20478	0.3097049
Macnamara	Liberal	17073	0.2582084
Macnamara	Informal	2325	0.0351628
Macnamara	United Australia Party	1277	0.0193131
Macnamara	Liberal Democrats	1254	0.0189652
Macnamara	Animal Justice Party	1110	0.0167874
Macnamara	Independent	1102	0.0166664
Macnamara	Pauline Hanson's One Nation	899	0.0135963

This data is available for all electorates. Figure ?? show primary voting for the Australian Labor Party (ALP) in Victoria.

Vote in Victoria - Labor Party



3 Census 2021 Results

The Australian Bureau of Statistics (ABS) publishes data packs with the Census data (<https://www.abs.gov.au/census/find-census-data/datapacks>). The ABS provides these data packs in a range of geographical aggregations, including federal electorates.

Data for this presentation has been retrieved using the {Census2021.DataPack} package (<https://github.com/HughParsonage/Census2021.DataPack>), but there is scope to improve the retrieval method.

Table 3 shows a summary of all the data collated by the census. Table 4 and figure ?? show a sample of median income per household in Victorian electorates.

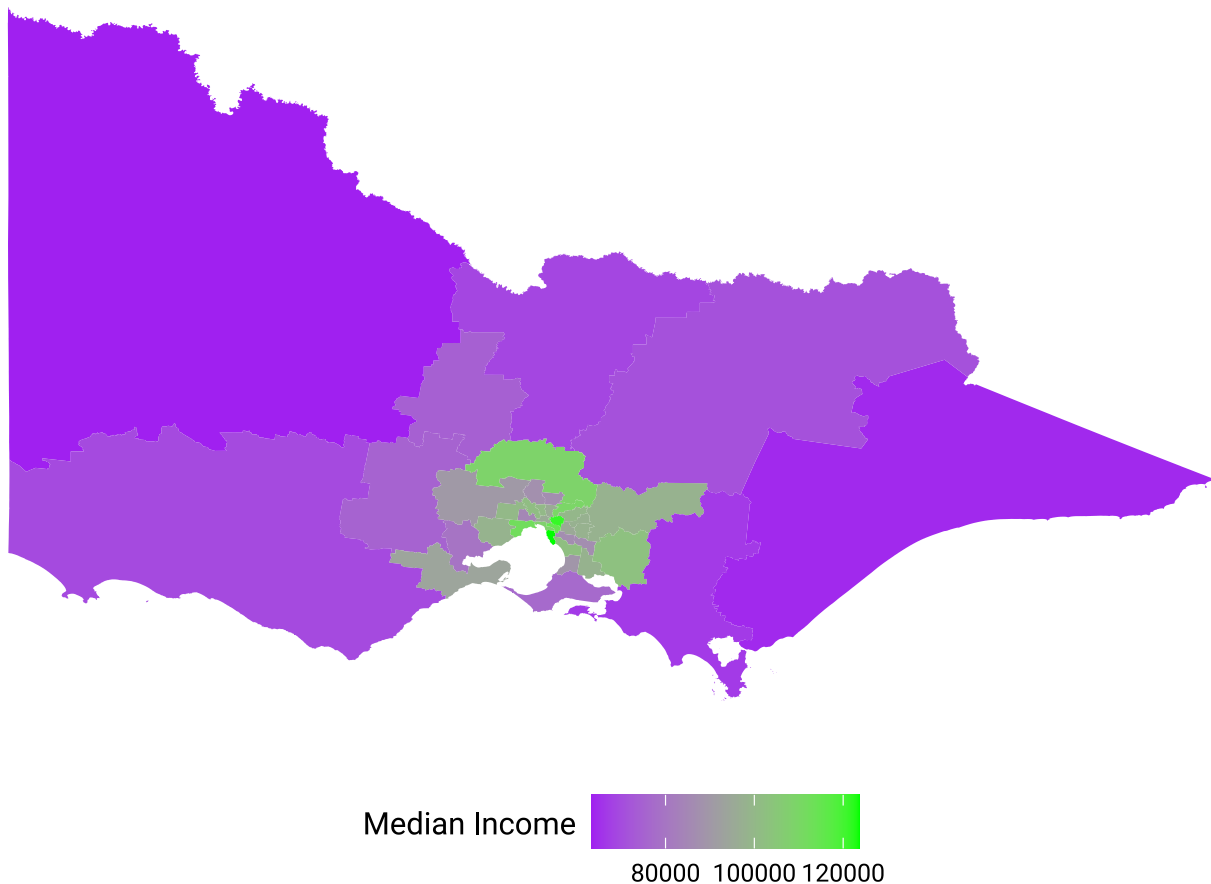
Table 3: Census tables

Table Number	Table Name	Table population	...4	...5
G01	Selected Person Characteristics by Sex	Persons	NA	NA
G02	Selected Medians and Averages	NA	NA	NA
G03	Place of Usual Residence by Place of Enumeration on Census Night by Age	Persons (excludes overseas visitors)	NA	NA
G04	Age by Sex	Persons	NA	NA
G05	Registered Marital Status by Age by Sex	Persons aged 15 years and over	NA	NA
G06	Social Marital Status by Age by Sex	Persons aged 15 years and over	NA	NA
G07	Indigenous Status by Age by Sex	Persons	NA	NA
G08	Ancestry by Country of Birth of Parents	Responses and persons	NA	NA
G09	Country of Birth of Person by Age by Sex	Persons	NA	NA
G10	Country of Birth of Person by Year of Arrival in Australia	Persons born overseas	NA	NA
G11	Proficiency in Spoken English by Year of Arrival in Australia by Age	Persons born overseas	NA	NA
G12	Proficiency in Spoken English of Parents by Age of Dependent Children	Dependent children in couple families	NA	NA
G13	Language Used at Home by Proficiency in Spoken English by Sex	Persons	NA	NA
G14	Religious Affiliation by Sex	Persons	NA	NA
G15	Type of Educational Institution Attending (Full-time/Part-Time Student Status by Age) by Sex	Persons attending an educational institution	NA	NA
G16	Highest Year of School Completed by Age by Sex	Persons aged 15 years and over who are no longer attending primary or secondary school.	NA	NA
G17	Total Personal Income (Weekly) by Age by Sex	Persons aged 15 years and over	NA	NA
G18	Core Activity Need for Assistance by Age by Sex	Persons	NA	NA
G19	Type of Long-Term Health Condition by Age by Sex	Persons	NA	NA
G20	Count of Selected Long-Term Health Conditions by Age by Sex	Persons	NA	NA
G21	Type of Long-Term Health Condition by Selected Person Characteristics	Persons	NA	NA
G22	Australian Defence Force Service by Age by Sex	Persons aged 15 years and over	NA	NA
G23	Voluntary Work for an Organisation or Group by Age by Sex	Persons aged 15 years and over	NA	NA
G24	Unpaid Domestic Work: Number of Hours by Age by Sex	Persons aged 15 years and over	NA	NA
G25	Unpaid Assistance to a Person with a Disability Health Condition or Due to Old Age by Age by Sex	Persons aged 15 years and over	NA	NA
G26	Unpaid Child Care by Age by Sex	Persons aged 15 years and over	NA	NA
G27	Relationship in Household by Age by Sex	Persons in occupied private dwellings	NA	NA
G28	Number of Children Ever Born	Females aged 15 years and over	NA	NA
G29	Family Composition	Families and persons in families in occupied private dwellings	NA	NA
G30	Family Composition and Country of Birth of Parents by Age of Dependent Children	Dependent children	NA	NA
G31	Family Blending	Couple families with children	NA	NA
G32	Total Family Income (Weekly) by Family Composition	Families in family households	NA	NA
G33	Total Household Income (Weekly) by Household Composition	Occupied private dwellings	NA	NA
G34	Number of Motor Vehicles by Dwellings	Occupied private dwellings	NA	NA
G35	Household Composition by Number of Persons Usually Resident	Occupied private dwellings	NA	NA
G36	Dwelling Structure	Private dwellings and persons in occupied private dwellings	NA	NA
G37	Tenure and Landlord Type by Dwelling Structure	Occupied private dwellings	NA	NA
G38	Mortgage Repayment (Monthly) by Dwelling Structure	Occupied private dwellings being purchased	NA	NA
G39	Mortgage Repayment (Monthly) by Family Composition	Families in occupied private dwellings being purchased	NA	NA
G40	Rent (Weekly) by Landlord Type	Occupied private dwellings being rented	NA	NA
G41	Dwelling Structure by Number of Bedrooms	Occupied private dwellings	NA	NA
G42	Dwelling Structure by Household Composition and Family Composition	Occupied private dwellings	NA	NA
G43	Selected Labour Force Education and Migration Characteristics by Sex	Persons	NA	NA
G44	Place of Usual Residence 1 Year Ago by Sex	Persons aged 1 year and over	NA	NA
G45	Place of Usual Residence 5 Years Ago by Sex	Persons aged 5 years and over	NA	NA
G46	Labour Force Status by Age by Sex	Persons aged 15 years and over	NA	NA
G47	Labour Force Status by Sex of Parents by Age of Dependent Children for Couple Families	Dependent children in couple families	NA	NA
G48	Labour Force Status by Sex of Parent by Age of Dependent Children for One Parent Families	Dependent children in one parent families	NA	NA
G49	Highest Non-School Qualification: Level of Education by Age by Sex	Persons aged 15 years and over with a non-school qualification	NA	NA
G50	Highest Non-School Qualification: Field of Study by Age by Sex	Persons aged 15 years and over with a non-school qualification	NA	NA
G51	Highest Non-School Qualification: Field of Study by Occupation by Sex	Employed persons aged 15 years and over with a non-school qualification	NA	NA
G52	Highest Non-School Qualification: Level of Education by Occupation by Sex	Employed persons aged 15 years and over with a non-school qualification	NA	NA
G53	Highest Non-School Qualification: Level of Education by Industry of Employment by Sex	Employed persons aged 15 years and over with a non-school qualification	NA	NA
G54	Industry of Employment by Age by Sex	Employed persons aged 15 years and over	NA	NA
G55	Industry of Employment by Hours Worked by Sex	Employed persons aged 15 years and over	NA	NA
G56	Industry of Employment by Occupation	Employed persons aged 15 years and over	NA	NA
G57	Total Family Income (Weekly) by Labour Force Status of Partners for Couple Families with No Children	Couple families with no children	NA	NA
G58	Total Family Income (Weekly) by Labour Force Status of Parents/Partners for Couple Families with Children	Couple families with no children	NA	NA
G59	Total Family Income (Weekly) by Labour Force Status of Parent for One Parent Families	One parent families	NA	NA
G60	Occupation by age by Sex	Employed persons aged 15 years and over	NA	NA
G61	Occupation by Hours Worked by Sex	Employed persons aged 15 years and over	NA	NA
G62	Method of Travel to Work by Sex	Employed persons aged 15 years and over	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Table 4: Median House Income - Sample

CED_NAME21	medianTotalHouseholdIncome
Banks	99996
Barton	100724
Bennelong	110448
Berowra	135668
Blaxland	75504
Bradfield	137488

Median House Income in Victoria- 2021 Census



4 Other statistical data

The ABS also provide a range of other statistical data, through their Time Series and Data Cubes products. This data is not aggregated by electorate - it could be presented by Local Government Area (LGA), State or other.

For this type of data, the package {readabs} provide a good interface. This data can be used to supplement Census data if necessary.

5 Weather Data

The Bureau of Meteorology (BoM) provides historical data since the start of the 20th century. This data is not directly available for programmatic download from the BoM's website - however the package {cropgrowdays} (<https://gitlab.com/petebaker/cropgrowdays/>) provides a way to retrieve national data from Queensland's government Longpaddock service (<https://www.longpaddock.qld.gov.au/>).

A sample for Melbourne is presented in table 5.

Table 5: Milestones

year	day	radn	maxt	mint	rain	evap	vp	code	date_met
1944	275	7.0	21.9	9.5	0.0	2.6	13.2	333263	1944-10-01
1944	276	14.4	13.9	6.6	19.3	2.2	10.2	333263	1944-10-02
1944	277	23.2	15.2	5.0	4.5	3.3	9.2	333263	1944-10-03
1944	278	12.4	18.9	9.5	0.9	2.8	11.2	333263	1944-10-04
1944	279	14.4	17.7	10.2	0.9	2.8	11.3	333263	1944-10-05
1944	280	20.1	19.0	8.7	0.0	3.4	11.7	333263	1944-10-06