

Our Community Hubs: Looking ahead

Predicting the future Our Community Hubs

Submitted by: Curious Zucchini Team



Project Goal

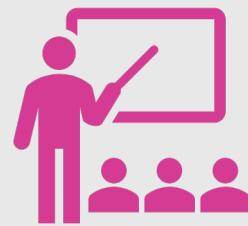
- Create a predictive model that determines which schools should be prioritized in opening a new hub
- This will use the demographic information of each opened community hub and find which schools have similar profiles, and then prioritize schools with most similar profiles
- In achieving this goal, we the following datasets were used:
 - List of Hubs as provided by the Datathon committee
 - List of schools as provided by the Datathon committee
 - ABS Census 2016 open data available in the ABS website

Process

- Model development
 - Lime was used in developing predictive model
 - All responses from the ABS Census data were combined with the school information data using post code
 - This allows the group to develop the model without having to apply geospatial techniques
 - 2016 school data was used – as it is aligned with the data collection of the census and near the opening of the Our Community Hubs (2015)
 - All schools are tagged as with hubs or no hubs which was framed as the output variable
 - Data from the school information were dropped as they were nominated immediately as unimportant features of the model, namely: Postcode_POA, POA_CODE_2016, School Name, Rolled Reporting Description, School URL, Governing Body URL, Calendar Year, ACARA SML ID, AGE ID
 - A total of 15,576 columns were used for featurization and model development
 - We considered the factor of women isolation and work hours of their males partners as discussed during the datathon consultations and the data from ABS census which where in data generally covers binary gender roles
 - Tools Used
 - Python via Jupyter notebook/Google Collab for data wrangling and model development
 - Power BI for data visualization

RESULTS

Results Overview



A total of 215 features were selected as the final input variables in determining the probability of school opening a hub

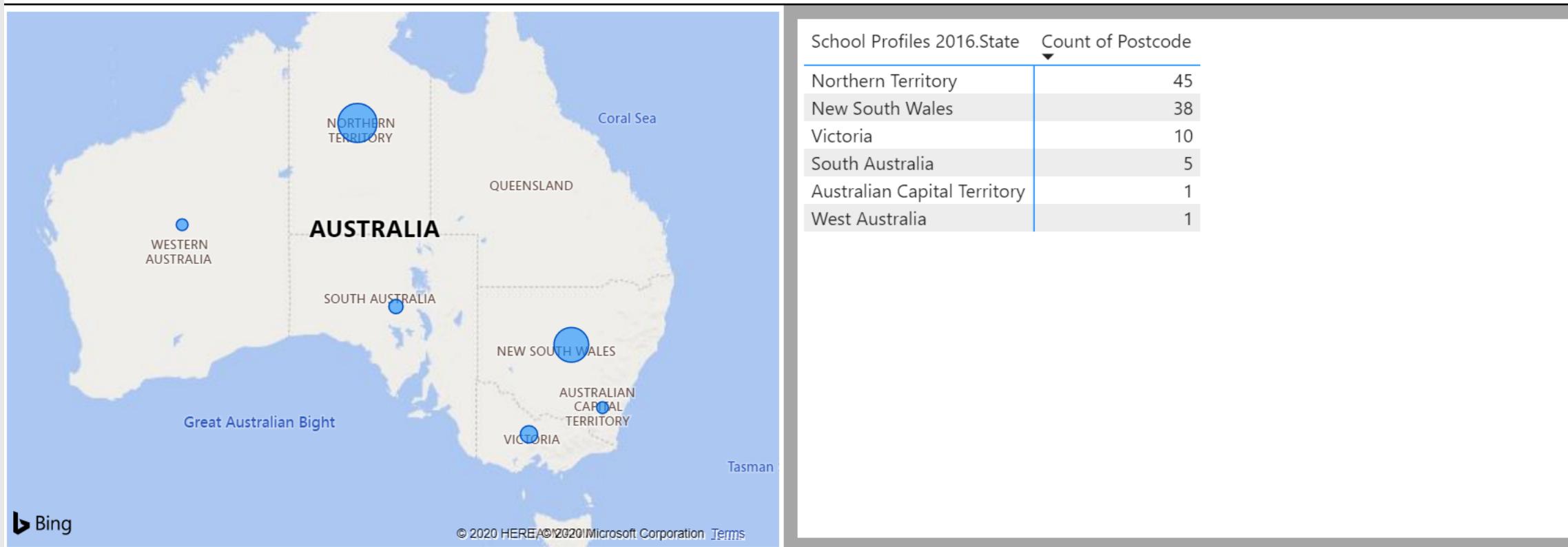


The features identified were mostly related to socio economic status, gender and work types with hours by gender



The schools were then ranked based on the probability of it being a hub and the percentage of hours worked based on their postcode

Recommended Priority Schools by State



Recommended Priority Schools in NT

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Alcoota School	Combined	Engawala	872	Northern Territory
Ampilatwatja School	Combined	Ampilatwatja	872	Northern Territory
Angurugu School	Combined	Angurugu	822	Northern Territory
Arlparra School	Combined	Sandover	872	Northern Territory
Borroloola School	Combined	Borroloola	854	Northern Territory
Bulman School	Combined	Bulman Weemol	852	Northern Territory
Finke School	Combined	Finke	872	Northern Territory
Gunbalanya School	Combined	Gunbalanya	822	Northern Territory
Imanpa School	Combined	Imanpa	872	Northern Territory
Jilkminggan School	Combined	Jilkminggan	852	Northern Territory
Kalkaringi School	Combined	Kalkarindji	852	Northern Territory
Lajamanu School	Combined	Lajamanu	852	Northern Territory
Ltyentye Apurte Catholic School	Combined	Santa Teresa	872	Northern Territory
Manyallaluk School	Primary	Eva Valley	822	Northern Territory
Mapuru Yirrkala College	Combined	Mapuru	822	Northern Territory
Mbunghara School	Combined	Papunya	872	Northern Territory
Minyerri School	Combined	Minyeri	852	Northern Territory
Mulga Bore School	Combined	Ti Tree	872	Northern Territory

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Murray Downs School	Combined	Ali Curung	872	Northern Territory
Murrupurtiyunu Catholic Primary School	Primary	Wurrumiyanga	822	Northern Territory
Mutitjulu School	Combined	Mutitjulu	872	Northern Territory
Neutral Junction School	Combined	Barrow Creek	872	Northern Territory
Newcastle Waters School	Combined	Newcastle Waters	862	Northern Territory
Nganmarriyanga School	Combined	Nganmarriyanga	822	Northern Territory
Ngukurr School	Combined	Ngukurr	852	Northern Territory
Ntaria School	Combined	Hermannsburg	872	Northern Territory
Numbulwar School	Combined	Numbulwar	822	Northern Territory
Nyangatjatjara College	Combined	Yulara	872	Northern Territory
Our Lady of the Sacred Heart Thamarrurr Catholic College	Combined	Wadeye	822	Northern Territory
Papunya School	Combined	Papunya	872	Northern Territory
Peppimenarti School	Combined	Peppimenarti	822	Northern Territory
Pigeon Hole School	Primary	Pigeon Hole	852	Northern Territory
Rockhampton Downs School	Combined	Tablelands	862	Northern Territory
Shepherdson College	Combined	Galiwinku	822	Northern Territory
St Francis Xavier Catholic School	Combined	Daly River	822	Northern Territory
St Joseph's Catholic Flexible Learning Centre	Special	Alice Springs	871	Northern Territory
Tiwi College	Combined	Tiwi Islands	822	Northern Territory
Urapunga School	Combined	Wilton	852	Northern Territory
Walungurru School	Primary	Kintore	872	Northern Territory
Watiyawana School	Combined	Mount Liebig	872	Northern Territory
Willowra School	Combined	Willowra	872	Northern Territory
Yipirinya School	Combined	Alice Springs	871	Northern Territory
Yirrkala Homeland School	Combined	Yirrkala	880	Northern Territory
Yirrkala School	Combined	Yirrkala	880	Northern Territory
Yuendumu School	Combined	Yuendumu	872	Northern Territory

Recommended Priority Schools in NSW

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
A.G.B.U. Alexander Primary School	Primary	Duffy's Forest	2084	New South Wales
Al Amanah College	Combined	Liverpool	2170	New South Wales
Al Noori Muslim School	Combined	Greenacre	2190	New South Wales
Al Sadiq College	Combined	Greenacre	2190	New South Wales
Al Zahra College	Combined	Arncliffe	2205	New South Wales
Al-Faisal College	Combined	Auburn	2144	New South Wales
Al-Faisal College - Campbelltown	Combined	Minto	2566	New South Wales
Arncliffe West Infants School	Primary	Arncliffe	2205	New South Wales
Auburn North Public School	Primary	Auburn	2144	New South Wales
Auburn Public School	Primary	Auburn	2144	New South Wales
Auburn West Public School	Primary	Auburn	2144	New South Wales
Australian International Academy, Kellyville Campus	Combined	Kellyville	2155	New South Wales
Australian International Academy, Sydney, Strathfield Campus	Combined	Strathfield	2135	New South Wales
Australian Islamic College of Sydney	Combined	Mount Druitt	2770	New South Wales
Bankstown West Public School	Primary	Bankstown	2200	New South Wales
Berala Public School	Primary	Berala	2141	New South Wales
Blaxcell Street Public School	Primary	Granville	2142	New South Wales
Campsie Public School	Primary	Campsie	2194	New South Wales

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Canley Vale Public School	Primary	Canley Vale	2166	New South Wales
Chullora Public School	Primary	Greenacre	2190	New South Wales
Granville East Public School	Primary	Granville	2142	New South Wales
Green Valley Islamic College	Combined	Green Valley	2168	New South Wales
Greenacre Public School	Primary	Greenacre	2190	New South Wales
Hampden Park Public School	Primary	Lakemba	2195	New South Wales
Kindlehill School	Combined	Wentworth Falls	2782	New South Wales
Lakemba Public School	Primary	Lakemba	2195	New South Wales
Old Guildford Public School	Primary	Guildford	2161	New South Wales
Our Lady of the Rosary Catholic Primary School	Primary	Fairfield	2165	New South Wales
Parramatta Public School	Primary	Parramatta	2150	New South Wales
Punchbowl Public School	Primary	Punchbowl	2196	New South Wales
Rissalah College	Primary	Lakemba	2195	New South Wales
Sacred Heart Catholic School	Primary	Cabramatta	2166	New South Wales
St Brendan's Catholic Primary School	Primary	Bankstown	2200	New South Wales
St Hurmizd Assyrian Primary School	Primary	Greenfield Park	2176	New South Wales
St Philip's Christian College DALE	Special	Waratah	2298	New South Wales
Trinity Grammar School	Combined	Summer Hill	2130	New South Wales
Wiley Park Public School	Primary	Wiley Park	2195	New South Wales
Yennora Public School	Primary	Yennora	2161	New South Wales

Recommended Priority Schools in VIC

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Al Siraat College	Combined	Epping	3076	Victoria
Al-Taqwa College	Combined	Hoppers Crossing	3029	Victoria
Antonine College	Combined	Pascoe Vale South	3044	Victoria
Australian International Academy of Education	Combined	Coburg	3058	Victoria
Glenroy Private	Combined	Glenroy	3046	Victoria
Hoa Nghiem Primary School	Primary	Springvale South	3172	Victoria
Mt Hira College	Combined	Keysborough	3173	Victoria
Noble Park English Language School	Special	Noble Park	3174	Victoria
St Joseph's School	Primary	Springvale	3171	Victoria
Western English Language School	Special	Braybrook	3019	Victoria

Recommended Priority Schools in SA

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Ernabella Anangu School	Combined	Ghan	872	South Australia
Kenmore Park Anangu School	Combined	Kenmore Park	872	South Australia
Mimili Anangu School	Combined	Mimili	872	South Australia
Murputja Anangu School	Combined	Murputja	872	South Australia
Pipalyatjara Anangu School	Combined	Pipalyatjara	872	South Australia

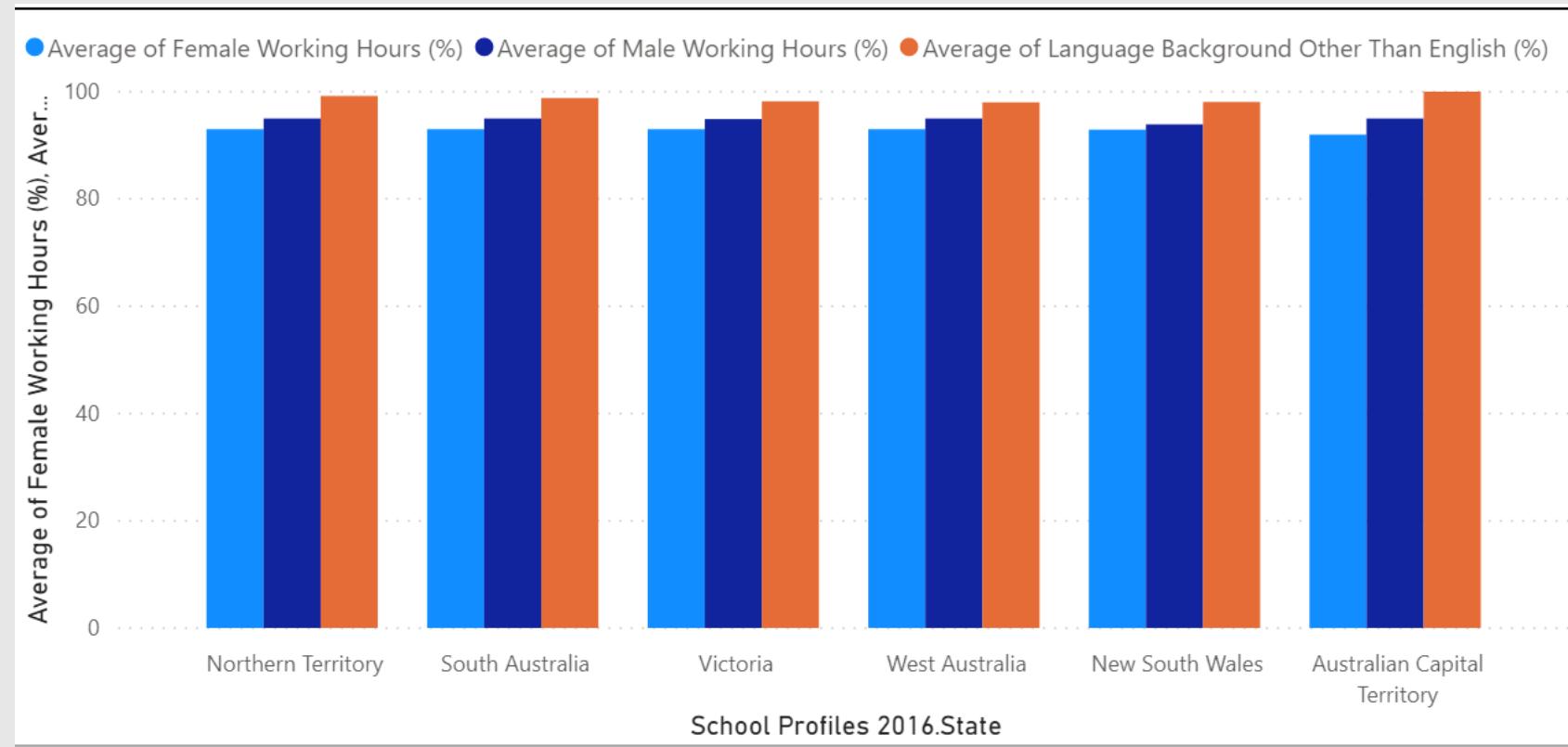
Recommended Priority Schools in ACT

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Taqwa School	Primary	Spence	2615	Australian Capital Territory

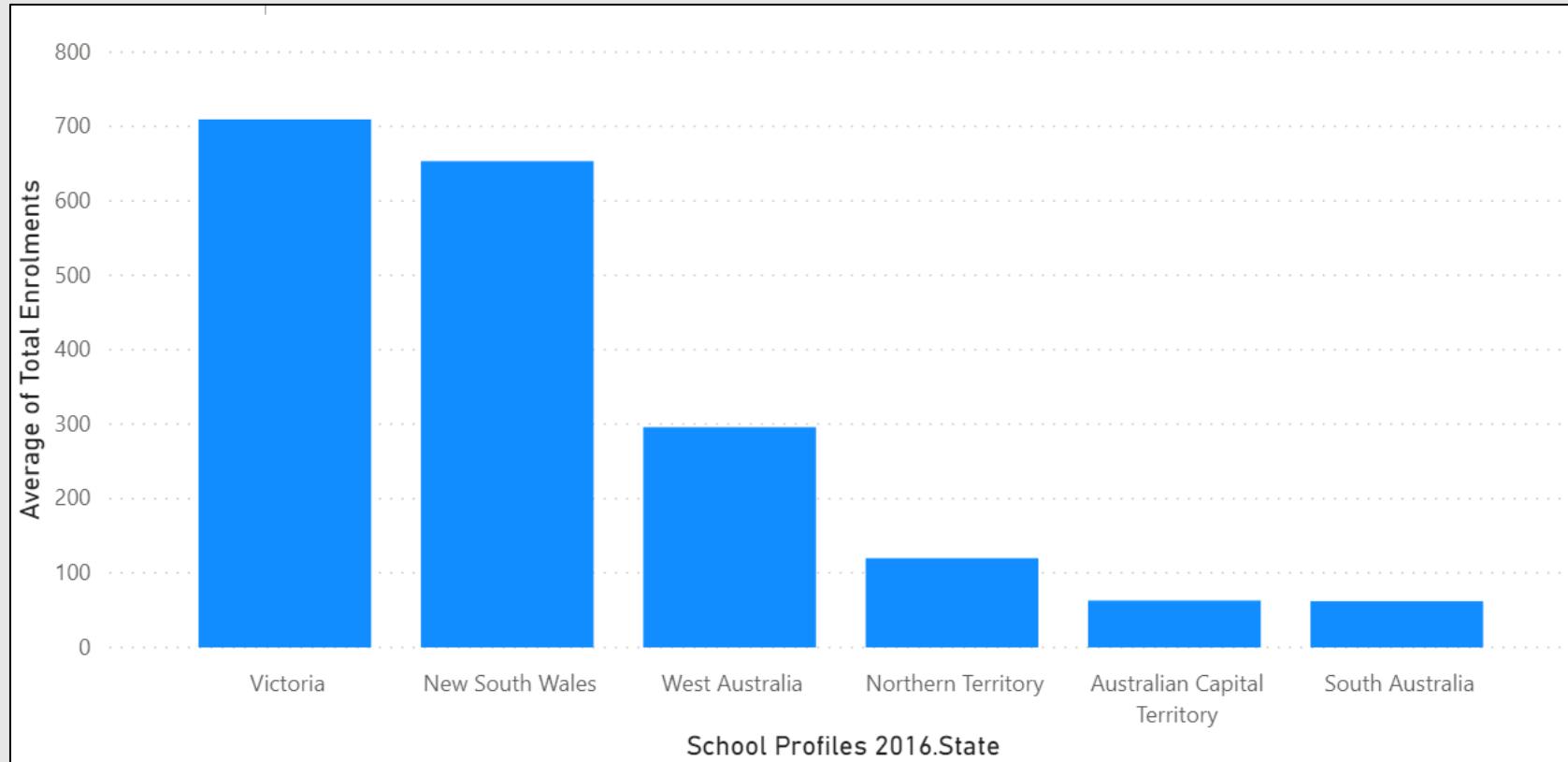
Recommended Priority Schools in WA

School Profiles 2016.School Name	School Profiles 2016.School Type	School Profiles 2016.Suburb	Postcode	School Profiles 2016.State
Ngaanyatjarrra Lands School	Combined	Warakurna	871	West Australia

Average of Female Working Hours, Average of Males Working Hours and Average of Language background other than English by State based on the top 100 schools



Average of Total Enrolments by State based on the top 100 schools



Enhancements to the model

- As a first round of model development, other things can be considered to enhance the code
 - Further reduce the number of features considered
 - Explore the possibility of developing a location neutral model
 - This provides an avenue for the Our Community Hubs to identify hubs based on the demographic characteristics of an area first

TEAM LEARNINGS



Catherina: This is the first time for me to join a datathon. My expectations were there will be a lot of interaction within the team and sharing of skills. Before the outbreak of covid-19, The difficulty to meet and collaborate was due to the other commitments that all the members have as well as the different skills that could not match the first time we met. Then, covid-19 made it worse that we could not physically meet. Nevertheless, we managed to communicate and collaborate online by being proactive and dedicated to meet the deadline and come up with the accurate results and reports that we could combine. For me, I thanked the cooperation and relentless effort of everyone as well as the great technology that we have now.



Adrian: I am extremely appreciative of my team who in spite of the unprecedented events occurring globally, were able to keep the show going and deliver. The major takeaway was that there is no better learning opportunities than a hackathon. The effectiveness of the team was largely due to having a relentless leader who was constantly driving positive communications.



Rina: Joining the Datathon allowed me to work with a diverse group of people that brought a holistic approach in helping the goals of Our Community Hubs. The main challenge was having to achieve this goal as the Covid19 escalated and we had to pivot in terms of completing our identified solution. I think with the lockdowns and health/safety protocols recently implemented, our work became more important as it increases issues of isolation. I am quite glad I was part of the Datathon.



Kit: I participated as a policy expert observer not a data scientist, so I was expecting to gain greater insight into and familiarity with the tools of data science, which I did. The biggest challenge of course was COVID 19. Online comms (file sharing and conferencing) work well but face to face with machines would have ensured greater engagement and learning opportunities. I was interested to learn that the Zukes model recommended prioritising a number of schools in remote Aboriginal communities that I have delivered schools program funding to. As I am aware of the many challenges in delivering and ensuring outcomes in these scenarios this tells me that the data model is but one useful part of the evidence base for a methodology. It would be interesting to see if these other challenges could be disaggregated and then layered in to the model (e.g. other targeted programs; cost to deliver - employees and travel and accom, participation rates before and after etc) and look at the result. Finally thanks so much to Rina and Catherina who did the heavy lifting, and Adrian who completed early work very quickly.

Questions? You may contact the team ☺

- **GITHUB:** <https://github.com/rm-github-general/datathonforsocialgood2020>
 - For the model and python code: Adrian and Rina
 - For the general presentation: Rina
 - For data visualization and analysis: Catharina
 - For implementation of the analysis: Kit

APPENDIX

List of features and definitions

Feature	Description	Feature	Description
Postcode	The postcode of the school's location.	Total Enrolments	The total number of students, including both full-time and part-time students, who are enrolled at the school in the calendar year specified.
ICSEA	The Index of Community Socio-Educational Advantage score for the school. This score is derived from a number of variables including parental school and non-school education and occupation, the school's geographical location and proportion of Indigenous students.	Girls Enrolments	The total number of female students, including both full-time and part-time students, who are enrolled at the school in the calendar year specified.
Bottom SEA Quarter (%)	The percentage of students positioned in the lowest socio-educational advantage quarter.	Boys Enrolments	The total number of male students, including full-time and part-time students, who are enrolled at the school in the calendar year specified.
Lower Middle SEA Quarter (%)	The percentage of students positioned in the lower middle socio-educational advantage quarter.	Indigenous Enrolments (%)	The percentage of students enrolled at the school who are of Aboriginal and/or Torres Strait Islander descent, identify themselves as such and are accepted as such by the community in which they live.
Upper Middle SEA Quarter (%)	The percentage of students positioned in the higher middle socio-educational advantage quarter.	Language Background Other Than English (%)	The proportion of students within a school's population who speak a language other than English at home.
Top SEA Quarter (%)	The percentage of students positioned in the highest socio-educational advantage quarter.	M_Mng_0	Males_Managers_Number_of_hours_worked_None
Teaching Staff	The number of full-time and part-time teaching staff members.	M_Mng_1_15	Males_Managers_Number_of_hours_worked_1_15_hours
Full Time Equivalent Teaching Staff	The full-time equivalent of full-time and part-time teaching members. This data is rounded to one decimal place. A full-time teacher is counted as 1.0; a teacher who works three days a week is counted as 0.6.	M_Mng_16_24	Males_Managers_Number_of_hours_worked_16_24_hours
Non-Teaching Staff	The number of full-time and part-time non-teaching staff members.	M_Mng_25_34	Males_Managers_Number_of_hours_worked_25_34_hours
Full Time Equivalent Non-Teaching Staff	The full-time equivalent of full-time and part-time non-teaching staff members. This data is rounded to one decimal place. A full-time member of staff is counted as 1.0; a member of staff who works three days a week is counted as 0.6.	M_Mng_35_39	Males_Managers_Number_of_hours_worked_35_39_hours

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M_Mng_40	Males_Managers_Number_of_hours_worked_40_hours	M_Pro_40	Males_Professionals_Number_of_hours_worked_40_hours	M_TTW_40	Males_Technicians_and_trades_workers_Number_of_hours_worked_40_hours
M_Mng_41_48	Males_Managers_Number_of_hours_worked_41_48_hours	M_Pro_41_48	Males_Professionals_Number_of_hours_worked_41_48_hours	M_TTW_41_48	Males_Technicians_and_trades_workers_Number_of_hours_worked_41_48_hours
M_Mng_49over	Males_Managers_Number_of_hours_worked_49_hours_and_over	M_Pro_49over	Males_Professionals_Number_of_hours_worked_49_hours_and_over	M_TTW_49over	Males_Technicians_and_trades_workers_Number_of_hours_worked_49_hours_and_over
M_Mng_hours_NS	Males_Managers_Number_of_hours_worked_Not_stated	M_Pro_hours_NS	Males_Professionals_Number_of_hours_worked_Not_stated	M_TTW_hours_NS	Males_Technicians_and_trades_workers_Number_of_hours_worked_Not_stated
M_Mng_Tot	Males_Managers_Total	M_Pro_Tot	Males_Professionals_Total	M_TTW_Tot	Males_Technicians_and_trades_workers_Total
M_Pro_0	Males_Professionals_Number_of_hours_worked_None	M_TTW_0	Males_Technicians_and_trades_workers_Number_of_hours_worked_None	M_CPS_0	Males_Community_and_personal_service_workers_Number_of_hours_worked_None
M_Pro_1_15	Males_Professionals_Number_of_hours_worked_1_15_hours	M_TTW_1_15	Males_Technicians_and_trades_workers_Number_of_hours_worked_1_15_hours	M_CPS_1_15	Males_Community_and_personal_service_workers_Number_of_hours_worked_1_15_hours
M_Pro_16_24	Males_Professionals_Number_of_hours_worked_16_24_hours	M_TTW_16_24	Males_Technicians_and_trades_workers_Number_of_hours_worked_16_24_hours	M_CPS_16_24	Males_Community_and_personal_service_workers_Number_of_hours_worked_16_24_hours
M_Pro_25_34	Males_Professionals_Number_of_hours_worked_25_34_hours	M_TTW_25_34	Males_Technicians_and_trades_workers_Number_of_hours_worked_25_34_hours	M_CPS_25_34	Males_Community_and_personal_service_workers_Number_of_hours_worked_25_34_hours
M_Pro_35_39	Males_Professionals_Number_of_hours_worked_35_39_hours	M_TTW_35_39	Males_Technicians_and_trades_workers_Number_of_hours_worked_35_39_hours	M_CPS_35_39	Males_Community_and_personal_service_workers_Number_of_hours_worked_35_39_hours

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M_CPS_40	Males_Community_and_personal_service_workers_Number_of_hours_worked_40_hours	M_CA_40	Males_Clerical_and_administrative_workers_Number_of_hours_worked_40_hours	M_Sal_40	Males_Sales_workers_Number_of_hours_worked_40_hours
M_CPS_41_48	Males_Community_and_personal_service_workers_Number_of_hours_worked_41_48_hours	M_CA_41_48	Males_Clerical_and_administrative_workers_Number_of_hours_worked_41_48_hours	M_Sal_41_48	Males_Sales_workers_Number_of_hours_worked_41_48_hours
M_CPS_49over	Males_Community_and_personal_service_workers_Number_of_hours_worked_49_hours_and_over	M_CA_49over	Males_Clerical_and_administrative_workers_Number_of_hours_worked_49_hours_and_over	M_Sal_49over	Males_Sales_workers_Number_of_hours_worked_49_hours_and_over
M_CPS_hours_NS	Males_Community_and_personal_service_workers_Number_of_hours_worked_Not_stated	M_CA_hours_NS	Males_Clerical_and_administrative_workers_Number_of_hours_worked_Not_stated	M_Sal_hours_NS	Males_Sales_workers_Number_of_hours_worked_Not_stated
M_CPS_Tot	Males_Community_and_personal_service_workers_Total	M_CA_Tot	Males_Clerical_and_administrative_workers_Total	M_Sal_Tot	Males_Sales_workers_Total
M_CA_0	Males_Clerical_and_administrative_workers_Number_of_hours_worked_None	M_Sal_0	Males_Sales_workers_Number_of_hours_worked_None	M_MOD_0	Males_Machinery_operators_and_drivers_Number_of_hours_worked_None
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M_CA_35_39	Males_Clerical_and_administrative_workers_Number_of_hours_worked_35_39_hours	M_Sal_35_39	Males_Sales_workers_Number_of_hours_worked_35_39_hours	M_MOD_35_39	Males_Machinery_operators_and_drivers_Number_of_hours_worked_35_39_hours

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M_MOD_40	Males_Machinery_operators_and_drivers_Number_of_hours_worked_40_hours	M_Lab_40	Males_Labourers_Number_of_hours_worked_40_hours	M_ID_NS_40	Males_Inadequately_described_Not_stated_Number_of_hours_worked_40_hours
M_MOD_41_48	Males_Machinery_operators_and_drivers_Number_of_hours_worked_41_48_hours	M_Lab_41_48	Males_Labourers_Number_of_hours_worked_41_48_hours	M_ID_NS_41_48	Males_Inadequately_described_Not_stated_Number_of_hours_worked_41_48_hours
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M_MOD_hours_NS	Males_Machinery_operators_and_drivers_Number_of_hours_worked_Not_stated	M_Lab_hours_NS	Males_Labourers_Number_of_hours_worked_Not_stated	M_ID_NS_hours_NS	Males_Inadequately_described_Not_stated_Number_of_hours_worked_Not_stated
M_MOD_Tot	Males_Machinery_operators_and_drivers_Total	M_Lab_Tot	Males_Labourers_Total	M_ID_NS_Tot	Males_Inadequately_described_Not_stated_Total
M_Lab_0	Males_Labourers_Number_of_hours_worked_None	M_ID_NS_0	Males_Inadequately_described_Not_stated_Number_of_hours_worked_None	M_Tot_0	Males_Total_Number_of_hours_worked_None
M_Lab_1_15	Males_Labourers_Number_of_hours_worked_1_15_hours	M_ID_NS_1_15	Males_Inadequately_described_Not_stated_Number_of_hours_worked_1_15_hours	M_Tot_1_15	Males_Total_Number_of_hours_worked_1_15_hours
M_Lab_16_24	Males_Labourers_Number_of_hours_worked_16_24_hours	M_ID_NS_16_24	Males_Inadequately_described_Not_stated_Number_of_hours_worked_16_24_hours	M_Tot_16_24	Males_Total_Number_of_hours_worked_16_24_hours
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M_Tot_hours_NS	Males_Total_Number_of_hours_worked_Not_stated	F_Mng_hours_NS	Females_Managers_Number_of_hours_worked_Not_stated	F_Pro_hours_NS	Females_Professionals_Number_of_hours_worked_Not_stated
M_Tot_Tot	Males_Total_Total	F_Mng_Tot	Females_Managers_Total	F_Pro_Tot	Females_Professionals_Total
F_Mng_0	Females_Managers_Number_of_hours_worked_None	F_Pro_0	Females_Professionals_Number_of_hours_worked_None	F_TTW_0	Females_Technicians_and_trades_workers_Number_of_hours_worked_None
F_Mng_1_15	Females_Managers_Number_of_hours_worked_1_15_hours	F_Pro_1_15	Females_Professionals_Number_of_hours_worked_1_15_hours	F_TTW_1_15	Females_Technicians_and_trades_workers_Number_of_hours_worked_1_15_hours
F_Mng_16_24	Females_Managers_Number_of_hours_worked_16_24_hours	F_Pro_16_24	Females_Professionals_Number_of_hours_worked_16_24_hours	F_TTW_16_24	Females_Technicians_and_trades_workers_Number_of_hours_worked_16_24_hours
F_Mng_25_34	Females_Managers_Number_of_hours_worked_25_34_hours	F_Pro_25_34	Females_Professionals_Number_of_hours_worked_25_34_hours	F_TTW_25_34	Females_Technicians_and_trades_workers_Number_of_hours_worked_25_34_hours
F_Mng_35_39	Females_Managers_Number_of_hours_worked_35_39_hours	F_Pro_35_39	Females_Professionals_Number_of_hours_worked_35_39_hours	F_TTW_35_39	Females_Technicians_and_trades_workers_Number_of_hours_worked_35_39_hours

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Feature	Description	Feature	Description	Feature	Description
F_TTW_40	Females_Technicians_and_trades_workers_Number_of_hours_worked_40_hours	F_CPS_40	Females_Community_and_personal_service_workers_Number_of_hours_worked_40_hours	F_CA_40	Females_Clerical_and_administrative_workers_Number_of_hours_worked_40_hours
F_TTW_41_48	Females_Technicians_and_trades_workers_Number_of_hours_worked_41_48_hours	F_CPS_41_48	Females_Community_and_personal_service_workers_Number_of_hours_worked_41_48_hours	F_CA_41_48	Females_Clerical_and_administrative_workers_Number_of_hours_worked_41_48_hours
F_TTW_49over	Females_Technicians_and_trades_workers_Number_of_hours_worked_49_hours_and_over	F_CPS_49over	Females_Community_and_personal_service_workers_Number_of_hours_worked_49_hours_and_over	F_CA_49over	Females_Clerical_and_administrative_workers_Number_of_hours_worked_49_hours_and_over
F_TTW_hours_NS	Females_Technicians_and_trades_workers_Number_of_hours_worked_Not_stated	F_CPS_hours_NS	Females_Community_and_personal_service_workers_Number_of_hours_worked_Not_stated	F_CA_hours_NS	Females_Clerical_and_administrative_workers_Number_of_hours_worked_Not_stated
F_TTW_Tot	Females_Technicians_and_trades_workers_Total	F_CPS_Tot	Females_Community_and_personal_service_workers_Total	F_CA_Tot	Females_Clerical_and_administrative_workers_Total
F_CPS_0	Females_Community_and_personal_service_workers_Number_of_hours_worked_None	F_CA_0	Females_Clerical_and_administrative_workers_Number_of_hours_worked_None	F_Sal_0	Females_Sales_workers_Number_of_hours_worked_None
F_CPS_1_15	Females_Community_and_personal_service_workers_Number_of_hours_worked_1_15_hours	F_CA_1_15	Females_Clerical_and_administrative_workers_Number_of_hours_worked_1_15_hours	F_Sal_1_15	Females_Sales_workers_Number_of_hours_worked_1_15_hours
F_CPS_16_24	Females_Community_and_personal_service_workers_Number_of_hours_worked_16_24_hours	F_CA_16_24	Females_Clerical_and_administrative_workers_Number_of_hours_worked_16_24_hours	F_Sal_16_24	Females_Sales_workers_Number_of_hours_worked_16_24_hours
F_CPS_25_34	Females_Community_and_personal_service_workers_Number_of_hours_worked_25_34_hours	F_CA_25_34	Females_Clerical_and_administrative_workers_Number_of_hours_worked_25_34_hours	F_Sal_25_34	Females_Sales_workers_Number_of_hours_worked_25_34_hours
F_CPS_35_39	Females_Community_and_personal_service_workers_Number_of_hours_worked_35_39_hours	F_CA_35_39	Females_Clerical_and_administrative_workers_Number_of_hours_worked_35_39_hours	F_Sal_35_39	Females_Sales_workers_Number_of_hours_worked_35_39_hours

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F_Sal_40	Females_Sales_workers_Number_of_hours_worked_40_hours	F_MOD_40	Females_Machinery_operators_and_drivers_Number_of_hours_worked_40_hours	F_Lab_40	Females_Labourers_Number_of_hours_worked_40_hours
F_Sal_41_48	Females_Sales_workers_Number_of_hours_worked_41_48_hours	F_MOD_41_48	Females_Machinery_operators_and_drivers_Number_of_hours_worked_41_48_hours	F_Lab_41_48	Females_Labourers_Number_of_hours_worked_41_48_hours
F_Sal_49over	Females_Sales_workers_Number_of_hours_worked_49_hours_and_over	F_MOD_49over	Females_Machinery_operators_and_drivers_Number_of_hours_worked_49_hours_and_over	F_Lab_49over	Females_Labourers_Number_of_hours_worked_49_hours_and_over
F_Sal_hours_NS	Females_Sales_workers_Number_of_hours_worked_Not_stated	F_MOD_hours_NS	Females_Machinery_operators_and_drivers_Number_of_hours_worked_Not_stated	F_Lab_hours_NS	Females_Labourers_Number_of_hours_worked_Not_stated
F_Sal_Tot	Females_Sales_workers_Total	F_MOD_Tot	Females_Machinery_operators_and_drivers_Total	F_Lab_Tot	Females_Labourers_Total
F_MOD_0	Females_Machinery_operators_and_drivers_Number_of_hours_worked_None	F_Lab_0	Females_Labourers_Number_of_hours_worked_None	F_ID_NS_0	Females_Inadequately_described_Not_stated_Number_of_hours_worked_None
F_MOD_1_15	Females_Machinery_operators_and_drivers_Number_of_hours_worked_1_15_hours	F_Lab_1_15	Females_Labourers_Number_of_hours_worked_1_15_hours	F_ID_NS_1_15	Females_Inadequately_described_Not_stated_Number_of_hours_worked_1_15_hours
F_MOD_16_24	Females_Machinery_operators_and_drivers_Number_of_hours_worked_16_24_hours	F_Lab_16_24	Females_Labourers_Number_of_hours_worked_16_24_hours	F_ID_NS_16_24	Females_Inadequately_described_Not_stated_Number_of_hours_worked_16_24_hours
F_MOD_25_34	Females_Machinery_operators_and_drivers_Number_of_hours_worked_25_34_hours	F_Lab_25_34	Females_Labourers_Number_of_hours_worked_25_34_hours	F_ID_NS_25_34	Females_Inadequately_described_Not_stated_Age_25_34_years
F_MOD_35_39	Females_Machinery_operators_and_drivers_Number_of_hours_worked_35_39_hours	F_Lab_35_39	Females_Labourers_Number_of_hours_worked_35_39_hours	F_ID_NS_35_39	Females_Inadequately_described_Not_stated_Number_of_hours_worked_35_39_hours

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F_ID_NS_40	Females_Inadequately_described_Not_stated_Number_of_hours_worked_40_hours
F_ID_NS_41_48	Females_Inadequately_described_Not_stated_Number_of_hours_worked_41_48_hours
F_ID_NS_49over	Females_Inadequately_described_Not_stated_Number_of_hours_worked_49_hours_and_over
F_ID_NS_hours_NS	Females_Inadequately_described_Not_stated_Number_of_hours_worked_Not_stated
F_ID_NS_Tot	Females_Inadequately_described_Not_stated_Total
F_Tot_0	Females_Total_Number_of_hours_worked_None
F_Tot_1_15	Females_Total_Number_of_hours_worked_1_15_hours
F_Tot_16_24	Females_Total_Number_of_hours_worked_16_24_hours
F_Tot_25_34	Females_Total_Age_25_34_years
F_Tot_35_39	Females_Total_Number_of_hours_worked_35_39_hours
F_Tot_40	Females_Total_Number_of_hours_worked_40_hours
F_Tot_41_48	Females_Total_Number_of_hours_worked_41_48_hours
F_Tot_49over	Females_Total_Number_of_hours_worked_49_hours_and_over
F_Tot_hours_NS	Females_Total_Number_of_hours_worked_Not_stated

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F_Tot_40	Females_Total_Number_of_hours_worked_40_hours
F_Tot_41_48	Females_Total_Number_of_hours_worked_41_48_hours
F_Tot_49over	Females_Total_Number_of_hours_worked_49_hours_and_over
F_Tot_hours_NS	Females_Total_Number_of_hours_worked_Not_stated
F_Tot_Tot	Females_Total_Total