Additional Information

ChengDa Zheng

Extra References:

1. **Prof. Pradicco From University of Toronto (This is my master reference_**

November 20, 2018

To whom it may concern

I am immensely pleased to have the opportunity to write a letter of recommendation for ChengDa (Dennis) Zheng, who is applying to your Master Program at the University of Toronto to pursue his graduate studies.

I first met Dennis in 2016, when we selected him to join our SSHRC funded Partnership Development Grant project *LInguistic and Cultural DIversity Reinvented* (LINCDIRE), when one of the partners who was supposed to be in charge of the development of the project online tools did not respond to the expectations of the project. Seen from a distance now, we were lucky that this happened as this gave us the opportunity to bring Dennis in the team. This was the best choice that we could ever make. Dennis was crucial to the life and success of the project. Not only he proved to be an incredibly knowledgeable and dedicated assistant, but he went well beyond the role we had envisaged for him at the beginning. The LINCDIRE project needed the development of a website and of a tool that would function as a platform for teachers and learners engaged with the implementation of the pedagogical materials developed by the team. Dennis developed both the website and the tool, which we called LITE (*Language Integration Through E-portfolio*). The latter was a particularly challenging endeavor, especially considering its innovative character. Dennis was not afraid to developed everything from scratch and with limited financial resources. The thinking process he put in the design phase of the process was exemplar. Dennis was able to understand the needs of the project team and to translate them effectively into a tool that corresponded exactly to aims and rationale of the project itself and that was user-friendly for teachers and students alike.

Throughout the project, Dennis proved highly intelligent, efficient, hardworking and at the same time a very reflective student, capable of building on the exchanges and indications provided by the team and of taking them to another level. Dennis was in fact able to interpret the wishes – almost the dreams – of the team and with an admirable modesty to come up with the most appropriate solutions. This rare capacity of listening to the team's needs and to support the project development was key in creating a sense of community and a positive atmosphere in the project life. It was also a pleasure for me to observe through our regular monthly project video-conferences how Dennis grew personally overcoming his shy attitude

to build his agency and capacity of clearly and effectively interact with each member of the team.

What I have found particularly remarkable throughout Dennis' contribution to our project is his capacity to make connections, to see the interconnectedness of the different aspects we were investigating and to translate this into practice through accessible and well-conceived tools.
One other characteristic that I particularly admire in Dennis is his sense of responsibility and commitment. Even when he stopped his active role in the project to fully dedicate himself to the completion of his undergraduate program alongside his professional engagements he continued to oversee the developments of LINCDIRE and he is still now able to guide us in our choices and provide invaluable advice.

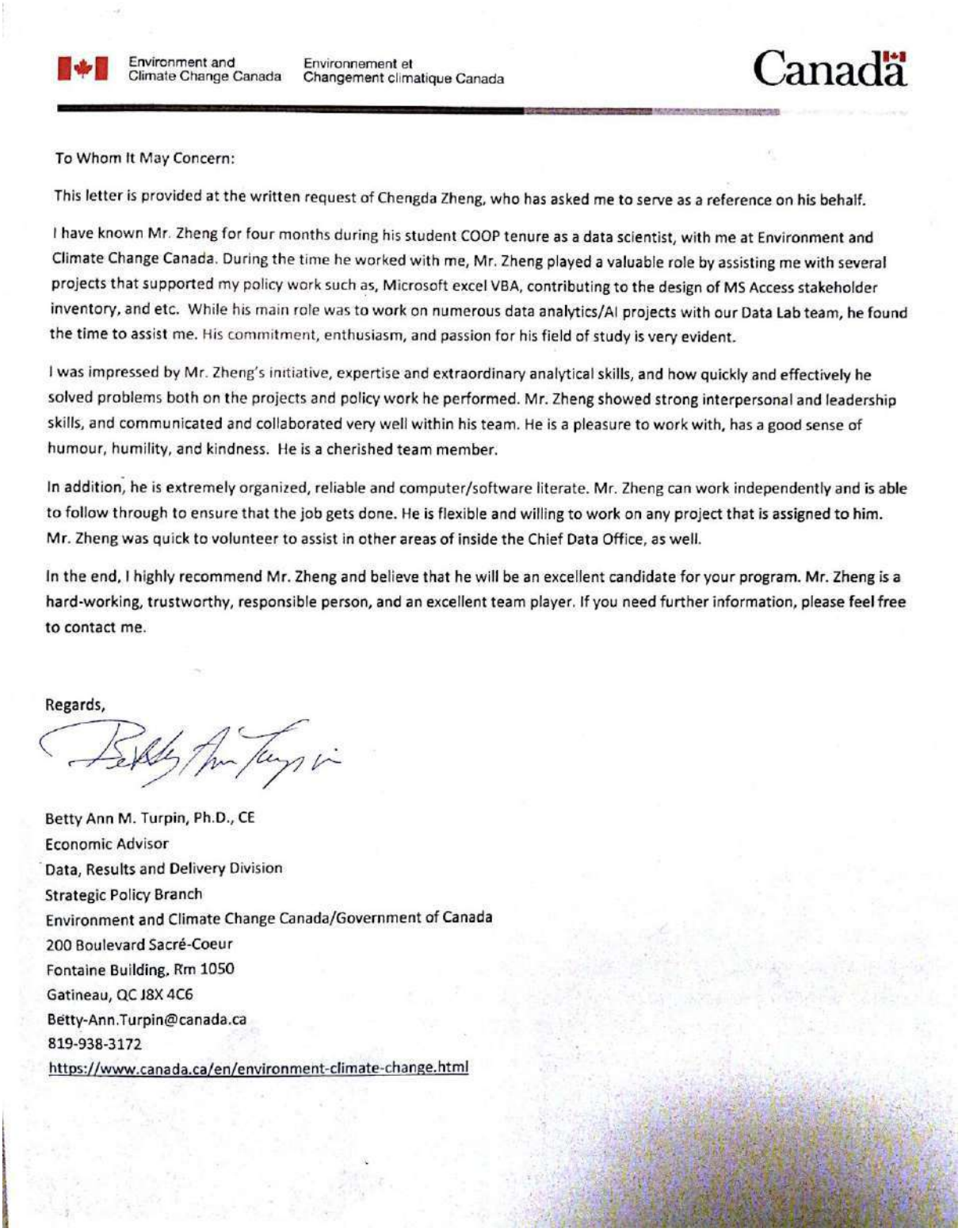
I am particularly happy to see that Dennis is planning to pursue his studies at the Master's level and I have no doubt he will make a trailblazing contribution in the field.

All his remarkable assets together with his strong work ethic and deep interest in the field of Computer Science makes of Dennis the perfect candidate for your program. I have absolutely no reservations in giving him my strongest possible recommendation.

Yours sincerely,

Enrica Piccardo PhD
Associate Professor
OISE-University of Toronto
CERLL Centre Head

2. Dr. Turpin (Economic Advisor From Environment and Climate Change Canada)



Environment and Climate Change Canada | Environnement et Changement climatique Canada

Canada

To Whom It May Concern:

This letter is provided at the written request of Chengda Zheng, who has asked me to serve as a reference on his behalf.

I have known Mr. Zheng for four months during his student COOP tenure as a data scientist, with me at Environment and Climate Change Canada. During the time he worked with me, Mr. Zheng played a valuable role by assisting me with several projects that supported my policy work such as, Microsoft excel VBA, contributing to the design of MS Access stakeholder inventory, and etc. While his main role was to work on numerous data analytics/AI projects with our Data Lab team, he found the time to assist me. His commitment, enthusiasm, and passion for his field of study is very evident.

I was impressed by Mr. Zheng's initiative, expertise and extraordinary analytical skills, and how quickly and effectively he solved problems both on the projects and policy work he performed. Mr. Zheng showed strong interpersonal and leadership skills, and communicated and collaborated very well within his team. He is a pleasure to work with, has a good sense of humour, humility, and kindness. He is a cherished team member.

In addition, he is extremely organized, reliable and computer/software literate. Mr. Zheng can work independently and is able to follow through to ensure that the job gets done. He is flexible and willing to work on any project that is assigned to him. Mr. Zheng was quick to volunteer to assist in other areas of inside the Chief Data Office, as well.

In the end, I highly recommend Mr. Zheng and believe that he will be an excellent candidate for your program. Mr. Zheng is a hard-working, trustworthy, responsible person, and an excellent team player. If you need further information, please feel free to contact me.

Regards,

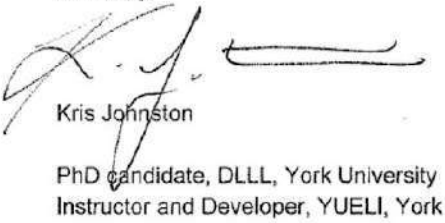
Betty Ann M. Turpin, Ph.D., CE
Economic Advisor
Data, Results and Delivery Division
Strategic Policy Branch
Environment and Climate Change Canada/Government of Canada
200 Boulevard Sacré-Coeur
Fontaine Building. Rm 1050
Gatineau, QC J8X 4C6
Betty-Ann.Turpin@canada.ca
819-938-3172
https://www.canada.ca/en/environment-climate-change.html

3. Kris Johnson (PhD Candidate and Founder of Rubus Education)

To whom it may concern,

My name is Kris Johnston and I work at the Department of Languages, Literatures and Linguistics at York University, as well as the York University English Language Institute. I have known Dennis for over 3 years now and am currently working with him on two different projects. One being an international academic project and the other being an entrepreneurial project that is connected to my PhD candidacy. Dennis has been an invaluable team member on both projects and has demonstrated excellent teamwork and quickly became integral to both efforts. He is hardworking, patient and communicative. He is also creative and offers excellent solutions to problems or issues that arise. He is always available when needed and very willing to help any team member when they are in need. Working with Dennis is an absolute pleasure and I wholeheartedly would recommend him for any project.

Sincerely,



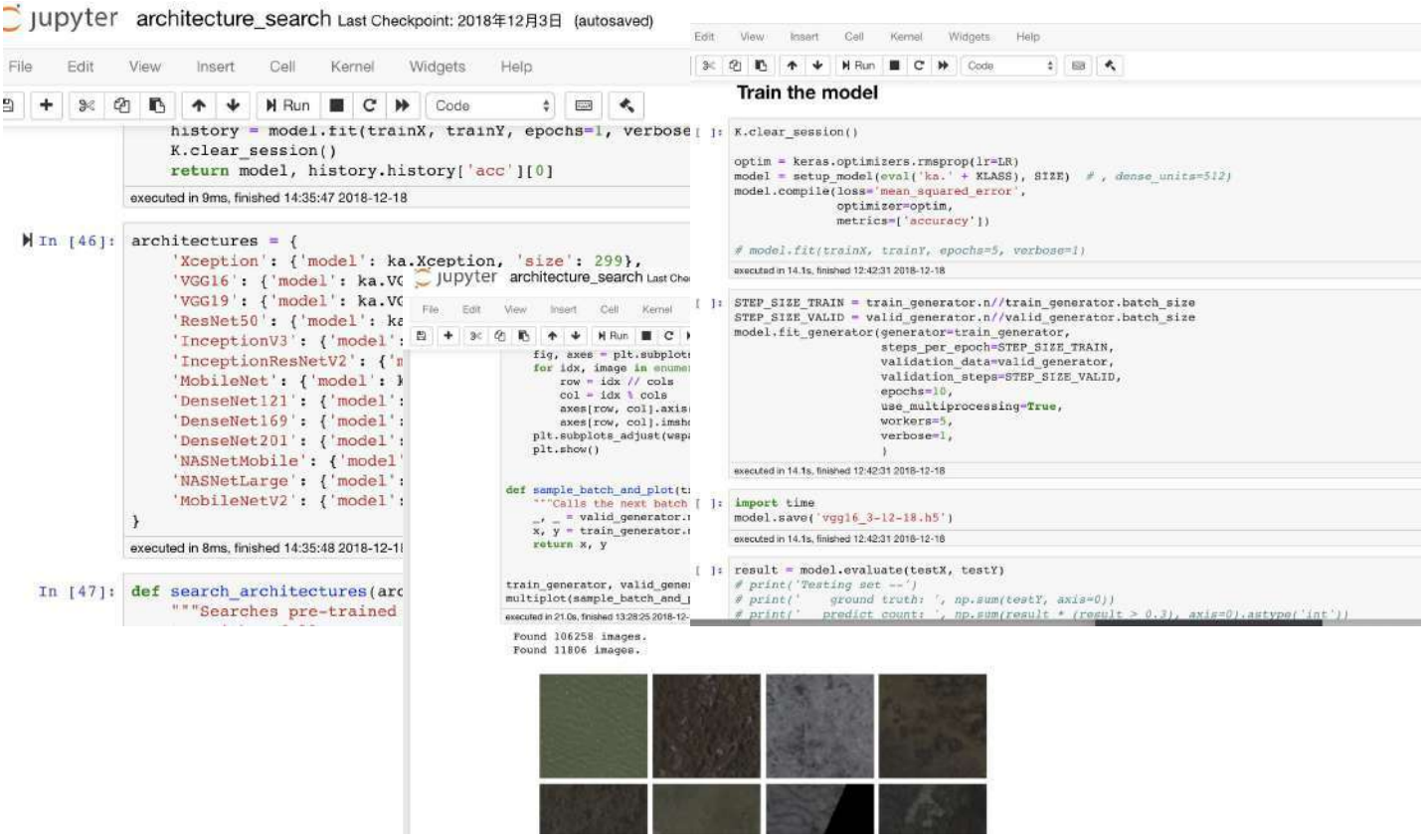
Kris Johnston

PhD candidate, DLLL, York University
Instructor and Developer, YUELI, York University

Work Collection

Bird Counting Project

In this project, I trained an ML model to detect the number of birds in huge satellite images for Environment and Climate Change Canada. I trained the model by VGG16 without a top, add FC-2 and FC-1024 with linear output and optimized by SGD. This model was able to recognize birds in huge satellite image collections in different scenarios, such as forest and wetland.



Code Snippets.

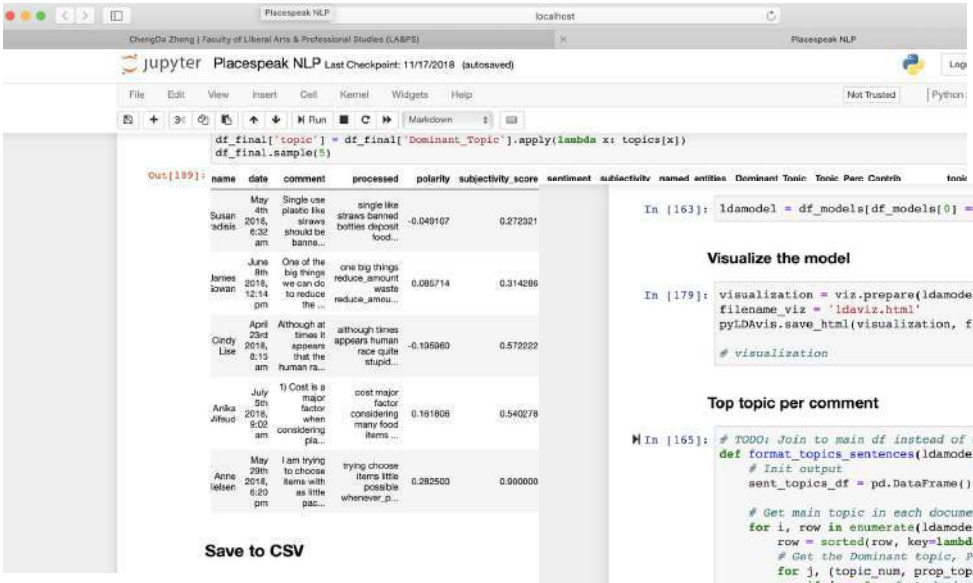
Sample Result

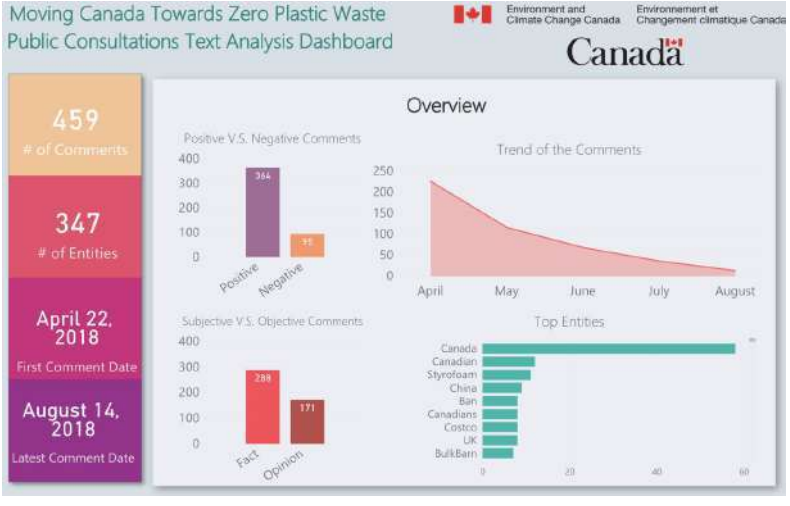
Text Analytics for Public Consultations Data.

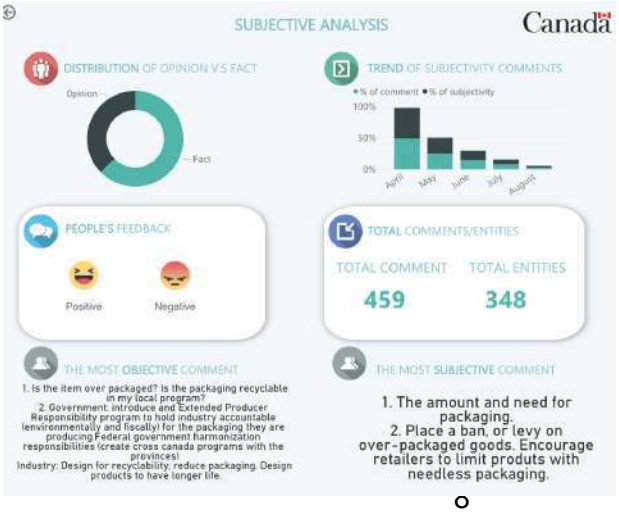
In this project, I scraped public consultations data on `placespeak.com`, structured it, and performed basic text analysis techniques on it using Natural Language Processing (NLP). Techniques used in this project, TextBlob for Sentiment Analysis, spacy for Named Entity Recognition, corpora and gensim for topic extraction. Please see slides for more information.

Objective:

1. Understand the public opinion about the plastic pollution, waste and heavy consumption
2. Find out the topics that Canadians are talking about regarding the plastic pollution
3. Find out the suggestions about plastic pollution from Canadians







D3 Project

In this project, I created D3 interactive dashboards to analyze and visualize energy consumption/ mining pollution across Canada,

Sample source data:

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region,sector,source,scenario,value,unit,base value,comparison value,base total,comparison total,
ALBERTA,TRANSPORTATION,ELECTRICITY,HIGH CO2 PRICE,0,PETAJOULE,0.42,0.958,461.0061,452.8871,0,0,20
ALBERTA,TRANSPORTATION,NATURAL GAS,HIGH CO2 PRICE,2,PETAJOULE,1.108,10.9764,461.0061,452.8871,0,2
ALBERTA,TRANSPORTATION,BIOMASS AND BIOFUELS,HIGH CO2 PRICE,0,PETAJOULE,12.6746,14.0537,461.0061,4
ALBERTA,TRANSPORTATION,SOLAR/WIND/GEOTHERMAL,HIGH CO2 PRICE,0,PETAJOULE,0,0,461.0061,452.8871,0,0
ALBERTA,TRANSPORTATION,COAL,HIGH CO2 PRICE,0,PETAJOULE,0,0,461.0061,452.8871,0,0,2015,2031,2017
ALBERTA,TRANSPORTATION,OIL PRODUCTS,HIGH CO2 PRICE,-3.0000000000000027,PETAJOULE,446.8035,426.899
BRITISH COLUMBIA,TRANSPORTATION,ELECTRICITY,HIGH CO2 PRICE,1,PETAJOULE,0.756,2.6257,343.453699999
BRITISH COLUMBIA,TRANSPORTATION,NATURAL GAS,HIGH CO2 PRICE,2,PETAJOULE,0.566,6.1198,343.453699999
BRITISH COLUMBIA,TRANSPORTATION,BIOMASS AND BIOFUELS,HIGH CO2 PRICE,1.9999999999999998,PETAJOULE,
BRITISH COLUMBIA,TRANSPORTATION,SOLAR/WIND/GEOTHERMAL,HIGH CO2 PRICE,0,PETAJOULE,0,0,343.45369999
BRITISH COLUMBIA,TRANSPORTATION,COAL,HIGH CO2 PRICE,0,PETAJOULE,0,0,343.45369999999997,343.1702,0
BRITISH COLUMBIA,TRANSPORTATION,OIL PRODUCTS,HIGH CO2 PRICE,-4.999999999999993,PETAJOULE,329.6017
MANITOBA,TRANSPORTATION,ELECTRICITY,HIGH CO2 PRICE,1,PETAJOULE,0,0.5982,86.5015,76.6622,0,1,2015,
MANITOBA,TRANSPORTATION,NATURAL GAS,HIGH CO2 PRICE,2,PETAJOULE,0,1.2114,86.5015,76.6622,0,2,2015,
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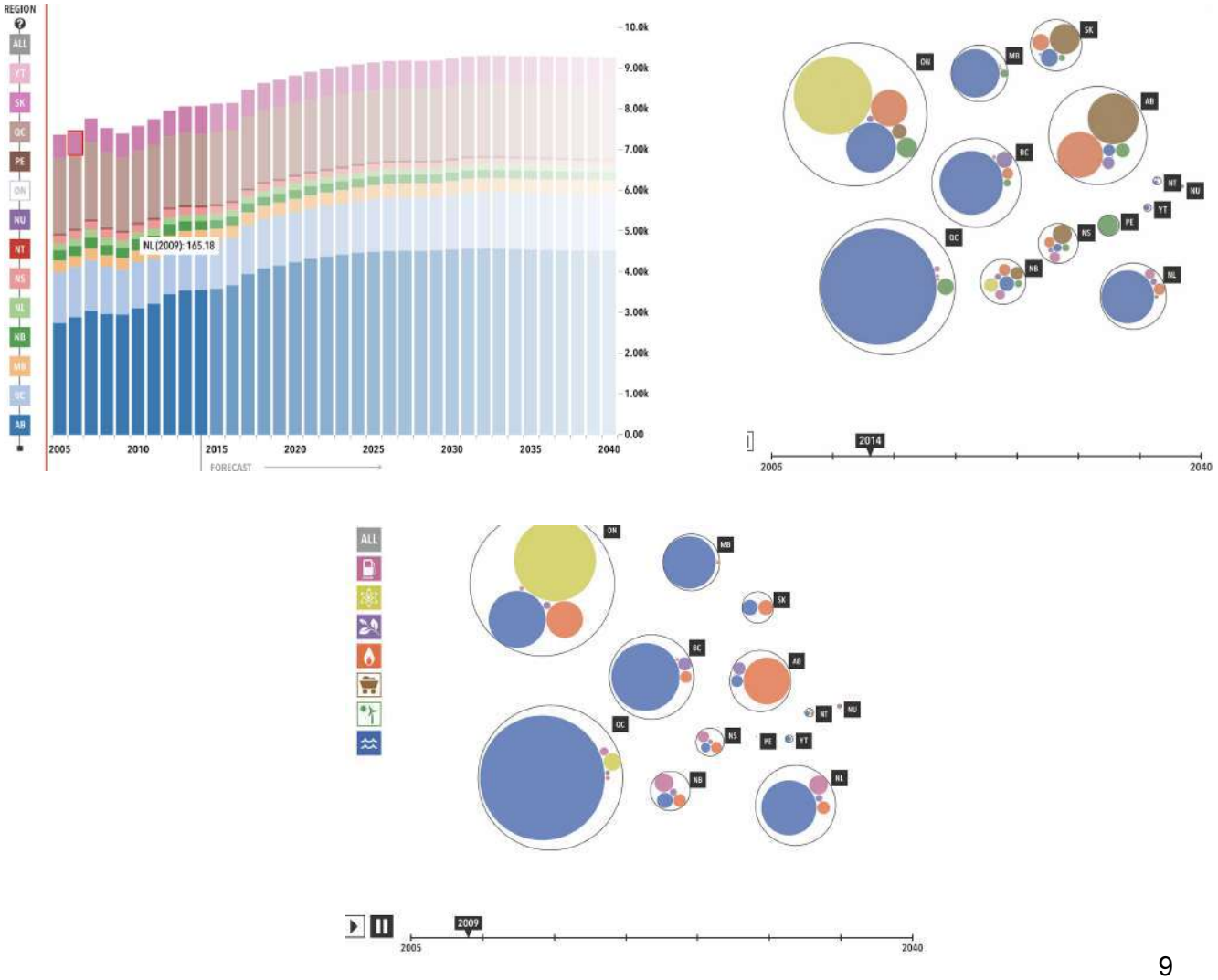
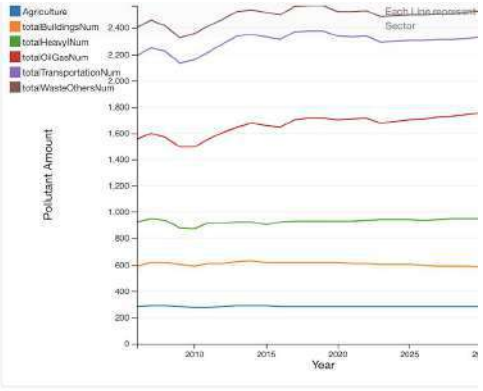
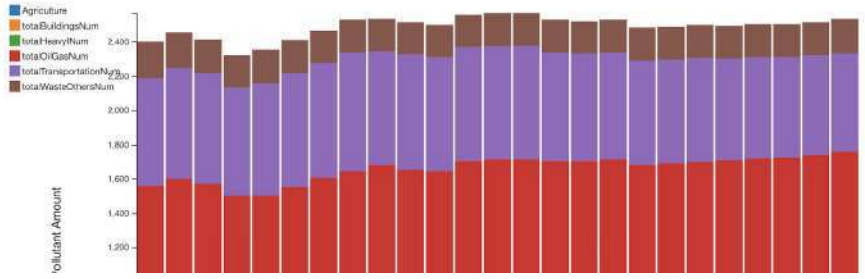
Sample of the Dashboards:

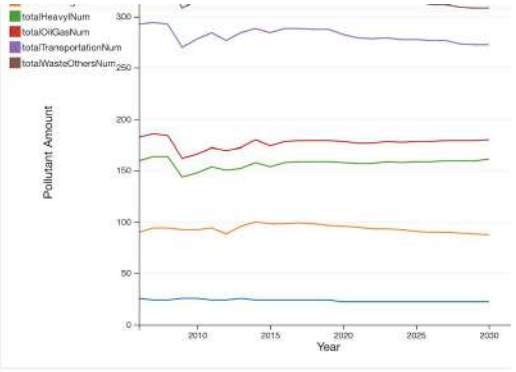




Stacked bar Chart

Stacked bar Chart





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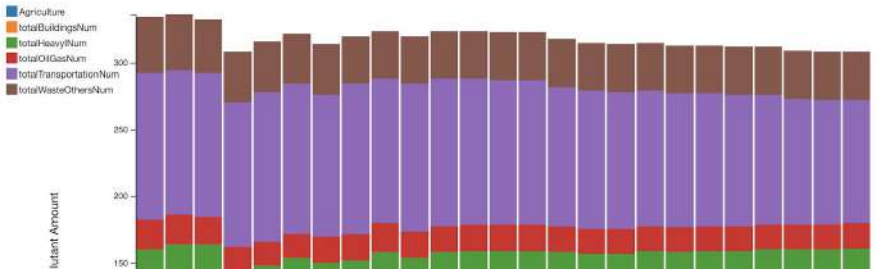


LINCDIRE Project

As a lead web developer, I led to developing (Developed the most parts of) the LINCDIRE E-portfolio (LITE) (www.lincdireproject.org) , which is used in language classrooms in secondary and post-secondary institutions across Canada, USA, and France.

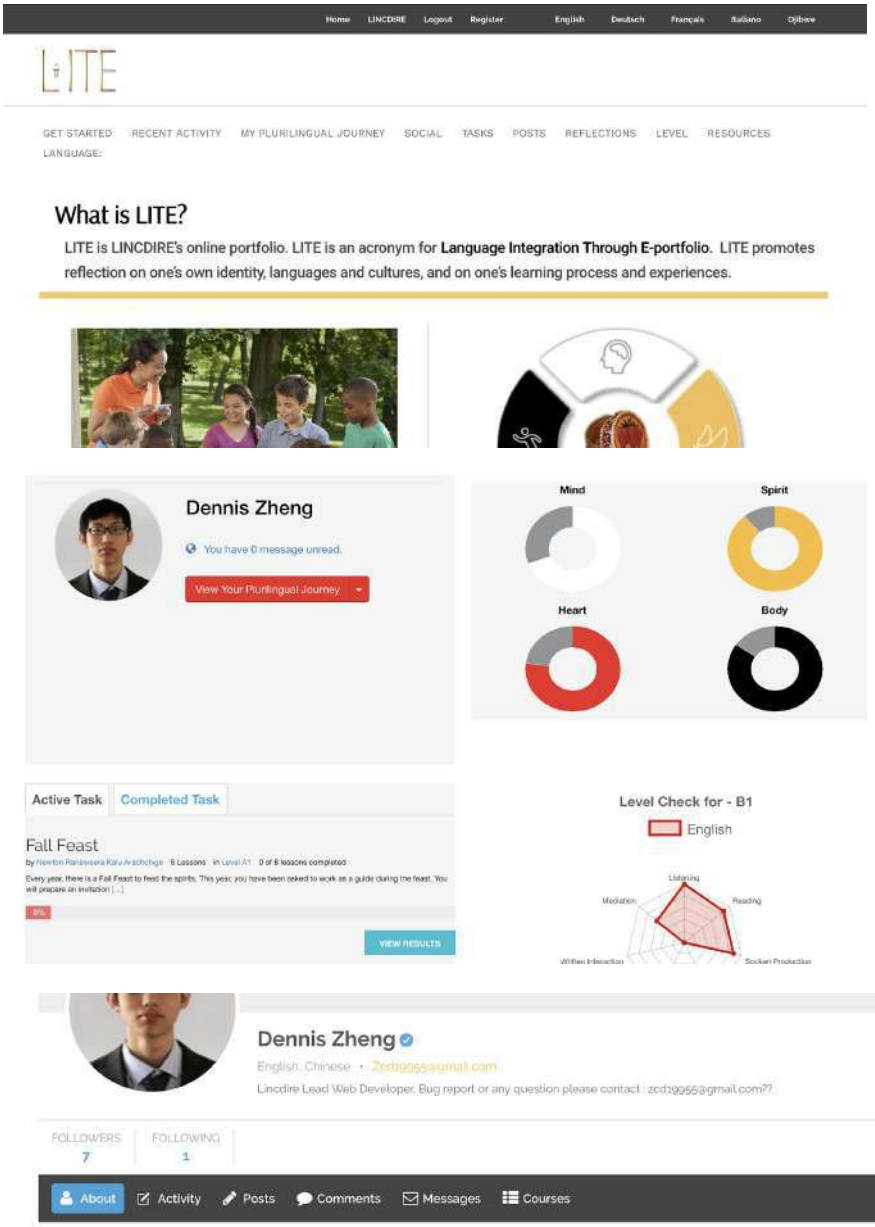
Objective

1) recognize linguistic and cultural diversity at the individual and social level

2) validate their existing linguistic and cultural competences/capital

3) become aware of (and build on) the added cognitive and metalinguistic value of plurilingualism

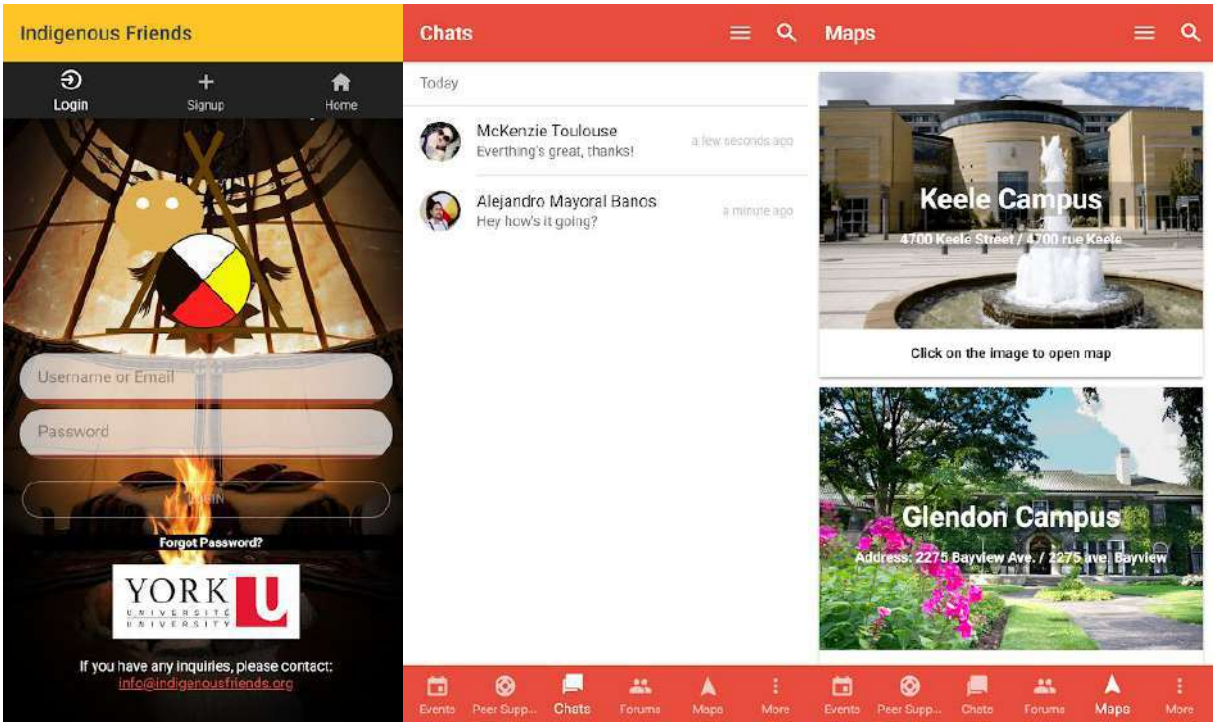
4) develop a plurilingual attitude and acquire life-long learning skills



Indigenous Friend APP

The Indigenous Friends App is a mobile application that seeks to create a safe space for Indigenous Youth (First Nations, Métis, and Inuit) in Canada. This app is implemented at York University and the University of Manitoba.

Objective: Create Indigenous Networks between Indigenous Youth.
Access to Traditional Indigenous Counseling.
Access to Information about the available resources in the community.



Sustainability through Ecosystem Health: Online information portal