

## EDUCATION

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**University of Toronto** Toronto  
*Master of Information (Data Science Concentration)* 2019 - Current

**York University** Toronto  
*Information Technology, Spec. Hons* 2014 - 2019

**GPA:** 3.9/4.0

**Awards:** 2015-2016 York University Continuing Student Scholarship  
2017-2018 York University Continuing Student Scholarship  
2018 Dean's Award for Research Excellence  
Dean's Circle Member

## RELATED ACADEMIC Publication

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**Zheng, C.**, \* Xue, J., \* Sun, Y. & Zhu, T. (RR). Commenting on PM Trudeau's daily briefing during the COVID-19 in Canada: data mining public opinions and sentiments on YouTube. Journal of medical internet research. (\*co-first author), J Med Internet Res (submitted). doi:10.2196/23957

Khaiter, P. A., & **Zheng, C.** (2018). An on-line information portal for environmental decision support through ecosystem health. *Environmental Modelling & Software*, 2018.

Xue, J., Chen, J., Chen, C., **Zheng, C.**, Li, S., & Zhu, T. (2020). Public discourse and sentiment during the COVID 19 pandemic: using latent dirichlet allocation for topic modeling on Twitter. (Accepted) Plos one.

Xue, J., Chen, J., Hu, R., Chen, C., **Zheng, C.**, Su, Y., & Zhu, T. (in press). Twitter discussions and emotions about COVID-19 pandemic: a machine learning approach. Journal of Medical Internet Research.

## WORK EXPERIENCE

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**Transportation Canada (FSWAP)** Gatineau, Ottawa Area  
*Junior Data Scientist* June 2020 –Current

My roles were 1.) to discover, evaluate and apply the existing research in natural language processing (NLP) and machine learning to analyze and classify the railway accident by scanning the inspection report. 2.) help in drafting and preparing modeling for the railway inspection results such as concern rate and visualized it in Power-bi. Working in agile teams, our aim is to develop prototypes based on current research (and complex business requirements) with production-quality code and turn them into products.

- Developed a machine learning system that could assign occurrence labels based on the meta data such as inspection comment and wrote API by Python to provide for the function group.
- Consolidate and bring the complex railway inspection and occurrence business rule to the models and visualized them in power bi.

**Environment and Climate Change Canada (FSWAP)** Gatineau, Ottawa Area  
*Junior Data Scientist* September 2018 – Jan 2019

- Developed machine learning model based on CNN by using Tensorflow, and Keras, used for predictive data modeling to detect the number of bird species with the high-resolution satellite images
- Built the cloud machine learning environment for chief data office using Xen, docker and container
- Used Python, Pandas, NumPy to optimize data efficiency and structure
- Used MySQL, Oracle, and object database for enforcement officer to upload their work record
- Used Genism, Spacy, TextBlob, Wordcloud in Python to bring about consulting recommendations
- Used Python to visualize Yukon River by monitoring data with Geopanda, Leaflet, Folium, & Matplotlib

- Used Power Bi to build a dashboard for data visualization and text & geographic analytics
- Use D3.js, CoffeeScript and Node.js to create automated, time serial and interactive dashboard

## **CIBC**

Toronto

### ***Intermediate Business Analyst (Co-Op)***

*September 2017 – December 2017*

- Worked with senior business consultants with BRUL, CR and UAT scenarios while logging defects
- Facilitated QA testing with new functionalities for stakeholders
- Provided system analysis advice to QA and developer team
- Documented and analyzed required information for new data signing system using TopTeam.
- Planned, developed, implemented, and supported new or existing applications through process design reviews. Review, analyze and re-engineer business processes.

## **Government of Ontario (Treasury Board Secretariat)**

Toronto

### ***Web Developer (intern)***

*May 2017 – September 2017*

- Suggested improvement processes for screens, workflow procedures and reports of application
- Full stack development (Slim as middleware, vue.js as front end, go language as endpoint, PHP as backend).
- Develop the Restful API by using the PHP and help migrate some of the API from PHP to GoLang
- Develop MYSQL and Redis Database for the web development.
- Developed new and improved upon existing PHP applications using MVC design pattern.
- Wrote wiki for plugins
- Developed and configured development environment with Vagrant and Docker.
- Used vue.js to create and develop web-based application by using varies backend API

## **EXTRA CURRICULAR EXPERIENCE**

### **University of Toronto / York University (LINCIRE Project / LINCIREProject.org)** Toronto

#### ***Lead Web Application Developer / Research Assistant (Before Dec 2017)*** *July 2016 – May 2018*

*My work was referred by Data Mining and Learning Analytics in Educational Research, Wiley & Blackwell (2016).*

- Led the analysis, design, development, performance tuning and testing activities for integration and migration solutions
- Developed the functionalities of the project using WordPress platform by using CSS, HTML, PHP and JavaScript
- Maintain platform security and the pilot project launch.
- Liaised with the Technology Research Coordinator and team members to adapt the functionality and design of the website, e-portfolio and project management tool to the evolving needs of the LINCIRE project
- Prepared periodic performance reports on our platform and distributed them to head researchers

### **PocketSchool (Student Community APP for iPhone – Nonprofit)**

Toronto

#### ***Co-Founder/Chief Academic Offer (www.pocketschool.ca)***

*July 2015 – Sep 2019*

Lead academic related operations and strategic directions with the full responsibilities from bottom-line factors including long-range planning. Provide management to: teaching team, university/school directors, academic product marketing team, and software development team .

- Managed and operated campus events ranging from 20-500 participants
- Host meets regarding sponsorship and formalized the deals into written contracts
- Demonstrated leadership by coordinating engaging schools & fundraising events

## **SKILLS**

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Python, Power Bi , Java, PHP & HTML, Oracle & MySQL, Adobe Photoshop, Microsoft Office, Excel, & VBA