

Experience

- **Rubikloud Technologies Inc. (Now part of Kinaxis Inc.)** *Data Scientist* (May 2019 - Current)
 - Optimizing promotional effectiveness and inventory for retailers with accurate demand forecasts.
 - Developed a general representation for promotion mechanics which reduced forecast errors by 50% and allowed for combining and comparing different promotion types.
 - Implemented feature extraction and training pipelines on GCP with **Spark** and **Kubernetes**. Prototyped model deployment using **MLflow** and deployed visualization server using **Bokeh**.
 - Lead the internal methodology documentation effort to standardize and formalize our data science practice.
- **TMX Group** *Research Intern* (Jan 2019 - Apr 2019)
 - Created representations for market volatility state with a variational auto-encoder using **Tensorflow**.
 - Generated insights on market conditions that are predictive of next-minute volatility. Check out presentation here (only works when open as PDF).
 - Extracted minute-level features from orders and trade tables in **Spark**.
- **Rubikloud Technologies Inc.** *Data Science Research Intern* (May 2017 - Dec 2018)
 - Developed a novel individualized demand forecasting model for joint purchase time predictions over multiple products by adapting a survival loss function to a recurrent neural network in **Tensorflow**.
 - Demonstrated that the novel approach out-performs tree-based models and standard squared-loss recurrent models for both open datasets as well as our proprietary retail datasets.

Publications

- Badescu A.L., **Chen T.**, Lin S., Tang D., *A Marked Cox model for the Number of IBNR Claims: Estimation and Application*, 2019, ASTIN Bulletin, Volume 49, Issue 3, pp. 709-739. <https://doi-org.myaccess.library.utoronto.ca/10.1017/asb.2019.15>
- **Chen T.**, Keng B., Moreno J., *Multivariate Arrival Times with Recurrent Neural Networks for Personalized Demand Forecasting*, 2018, Published in Proceedings of IEEE ICDM 2018 DMS Workshop. <https://arxiv.org/abs/1812.11444>

Education

- **University of Toronto** *PhD Statistics, Withdrew from Program* (2017 - 2019)
 - Awarded grants NSERC Engage (25,000 CAD) and Mitacs Accelerate (15,000 CAD) for research in demand forecasting at Rubikloud Technologies Inc.
 - Awarded grants Mitacs Accelerate (10,000 CAD) for research in market forecasting at TMX Group Inc.
- **University of Toronto** *MSc Statistics, GPA: 3.80/4.00* (2016 - 2017)
- **University of Toronto** *Hons BSc Statistics, GPA: 3.83/4.00* (2012 - 2016)

Last Updated: July 19, 2020