**Chen, Tianle.** Contact: tianle@utstat.utoronto.ca, tianle91.github.io.

## Experience

- **TMX Group** *Research Intern* (Jan 2019 - Apr 2019)
  - Developed a generative model and latent representation for market states and dynamics.
  - Clustering on latent representations reveals the market features that captures the current state and dynamics of the market.
- **Rubikloud Technologies Inc.** *Data Science Research Intern* (May 2017 - Dec 2018)
  - Developed a novel individualized demand forecasting model for joint predictions for purchase arrival times over multiple products using a Recurrent Neural Network (RNN-LSTM).
  - The model exploits partial information using a survival analysis approach to obtain accurate and flexible predictions compared to state-of-the-art machine learning approaches.
- **University of Toronto** *Student Researcher - Micro-Level IBNR Reserving* (May-Aug 2016)
  - Implemented a Hidden Markov Model in which latent states determine true claim arrival intensity and reporting delay determines thinning parameters for the reported claim arrival process.
  - Showed that this model is much better able to predict the number of unreported claims compared to aggregate models.
- **NSERC - URSA** *Student Researcher - Ruin Theory with a Common Fund* (May-Aug 2015)
  - Studied a common fund model where accounts receiving a steady cash inflow are also subject to random arrivals of losses with random loss sizes and accounts contribute to the common fund.
  - Showed the non-convexity of the feasible region (i.e. where individual accounts benefit by participating in the scheme). Estimated the intractable feasible region through an efficient sampling algorithm.
- **Dun & Bradstreet Singapore** *Database Assistant* (Dec 2011 - Aug 2012)
  - Automated formatting and verification procedures in loan, litigation and publication records.
  - Developed a calling script and for the Business Optimism Index survey project.

## Education

- **UNIVERSITY OF TORONTO**
  *Hons BSc Statistics* (2012 - 2016), *Cumulative GPA: 3.83/4.00 MSc Statistics* (2016 - 2017), *PhD Statistics* (2017 - )
  - Coursework includes topics in Applied Statistics, Measure Theory and Machine Learning.
  - Performed teaching and grading duties for Probability, Multivariate Data Analysis, Statistical Methods for Machine Learning.

## Technical Skills

- Proficient in {`Python, R`} as well as {`Tensorflow, Keras, XGBoost, Scikit-Learn`} to implement decision-trees, convolutional neural networks and recurrent neural networks for supervised learning.

- Experienced in `SQL` and `Spark` for distributed workloads.
- Familiar with version control using `GitHub` and operating in `Linux` environments.

## Publications

- **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. Available on Arxiv: `https://arxiv.org/abs/1812.11444`).
- Badescu A.L., **Chen T.**, Lin S., Tang D., *A Marked Cox model for the Number of IBNR Claims: Estimation and Application*, 2018, Submitted to ASTIN Bulletin.

## Awards

- **NSERC Engage, Mitacs Accelerate** (2017-18)
  Award value of 25,000 CAD and 15,000 CAD respectively for research partnership.
- **Ontario Graduate Scholarship - Masters** (2016-17)
  Award value of 15,000 CAD for progress in graduate studies.
- **NSERC - Undergraduate Student Research Awards** (2015, 16)
  Award value of 6,000 CAD each, for 2 summer terms, for research in Loss Models and Reserving.
- **Morneau Shepell Scholarship in Actuarial Science** (2013-14)
  Award value of 2,500 CAD for actuarial coursework in undergraduate studies.
- **University of Toronto Dean's List** (2013-14, 14-15, 15-16)
  Awarded for scoring in the top $20^{th}$ percentile during Undergraduate studies.

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