Chen, Tianle.

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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.

- **University of Toronto** *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.

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.

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.

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 20th percentile during Undergraduate studies.

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