Dylan Lee

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Experience

Data Scientist　　　　　　　　　May 2019 - Dec 2019
Ritual.co　　　　　　　　　　　　　　Toronto ON

- Worked closely with product and engineering teams to conduct experiment analysis: setup ~15 Looker dashboards to monitor KPIs, and conducted frequentist inference and Bayesian analysis to help roll out ~5 new features
- Used Python and CartoDB to implement a DBSCAN clustering algorithm to visualize location data and to automate strategy, sales, and expansion tasks
- Developed a Flask app for the marketing team that uses association rules and collaborative filtering algorithms to email merchant recommendations to users, increasing engagement KPI by 18%
- Created a Shiny R web app to forecast user purchase behaviour and retention rates which led to several growth initiatives
- Modelled merchant lifetime value for different markets and cohorts, resulting in reduced marketing costs and improved customer acquisition rates

Actuarial Consultant　　　　　　Sept 2018 - Dec 2018
Ernst & Young　　　　　　　　　　　Chicago IL

- Responsibilities included core audit support, client assumption reviews, product analysis, and valuation/financial reporting

Actuarial Analyst　　　　　　　　Jan 2018 - Apr 2018
Munich Re　　　　　　　　　　　　　New York NY

- Helped the Financial Reinsurance team perform statistical analysis to evaluate and execute insurance transactions and acquisitions

Actuarial Analyst　　　　　　　　May 2017 - Aug 2017
Intact Insurance　　　　　　　　　　Toronto ON

- Assisted in pricing of home & auto insurance products: fitted regression models to large datasets to enhance pricing matrix

Actuarial Analyst　　　　　　　　May 2016 - Aug 2016
Financial Services Commission of Ontario　　Toronto ON

- Worked in the retirement department to monitor various pension plans in Ontario: calculated windup liabilities of unfunded plans

Skills

- Python (NumPy, Pandas, Scikit-Learn, Matplotlib, Flask)
- R (tidyverse, ggplot2, dplyr, tidyr, tibble, lubridate, Shiny)
- SQL (BigQuery, SAS, Redash)
- Data Visualization: Looker, PowerBI, Excel, Sheets, PowerPoint
- Modelling & Machine Learning: linear & logistic regression, k-means, random forest, SVM, n-gram NLP, boosting
- Other programming skills: Matlab, Git, Jira, Confluence, GSuite, VBA

Projects

All-NBA Team Predictions

- Built a logistic regression model to predict the All-NBA team after a given season by evaluating player performance with ~87% accuracy

NBA Player Stats Forecast

- Applied a simple projection system based on the Marcel the Monkey Forecasting System to forecast stats for a player in a new season based on prior seasons stats

Women's Rugby Canada Analysis

- Used a random forest model to predict fatigue levels for players on the Canadian National Women's Rugby 7s Team and examined principal drivers of fatigue to make recommendations to maximize performance

Predicting Life Satisfaction

- Built various models (LightGBM, XGBoost, random forest, logistic regression) based on survey data to predict whether respondents are satisfied with their lives with ~89% accuracy

Education

University of Waterloo - B.Math Statistics & Actuarial Science

Sept 2015 - Apr 2020

- Dean's Honours List
- 4.0 Cumulative GPA
- Relevant courses: forecasting, linear algebra, experimental design, statistical classification, applied probability, generalized linear models

Interests

- Sports (NBA, NHL, NFL, MLB), travelling, video games, concerts and music festivals