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Alex-Antoine Fortin

Education

Master of Science, Statistics 2015
UNIVERSITY OF TORONTO

Bachelor of Science, Mathematics 2011
UNIVERSITY OF MONTRÉAL

Interests
Statistical computing Network Architecture Scalable Machine Learning Better the world

Work history

Data Scientist I, American Family Insurance Since 2018
AWS, Flask, Git, Hive, Keras, Python, Scikit-learn, Scipy, Spark, TensorFlow
- *Venture Fellow class of 2018 for amfam ventures*: discuss ideas with CEOs and team, learn on investing strategies, raising capital, networking
- *Customers segmentation*: Model predicting who would: keep their insurance for 1+ year, not submit too many claims and add new policies to their existing ones. Resulting in a more focused marketing and saving AFI $100M over the next few years.
- *Model explanation with visual cues*: Popularized, at AFI, the use of a tool to explain why an input is scoring higher than another for our models. The tool provide a user-friendly interface helping our business partners to understand our modeling decisions.
- *Call volume forecasting*: Apache, AWS, Celery, Flask, Python, Scipy, Statsmodels, Ubuntu. Full stack project delivered from start to finish in 1.5 month to our business partner; resulting in dropping an external vendor.
- *Usage-Based Insurance (UBI)*: Implemented our scoring algorithm in Spark on a growing dataset with more than 42 billions rows. This was a 33x speedup with respect to the previous method. Developed a project allowing to score our customers 3x sooner than with previous methods.
- *Department's website owner*: Platform for sharing data-driven decision making tools

Statistical Research Modeler, American Family Insurance 2015 - 2018

Research Assistant, Professor Nancy Reid, University of Toronto Summer 2015
- Creating a R-package for higher-order inference

Teaching Assistant (statistics), University of Toronto 2014 - 2015
- Putting complex ideas into simple words
- Solving problems with students in a clever way

Side projects

Landmark classification, Kaggle 2018
Git, Keras, Tensorflow, Ubuntu
Used Mask R-CNN to identify and remove humans from14M images of landmarks
Classified 14M images into 5,000 different landmarks using a ResNet50 architecture
Inference with a pre-processing step using Mask R-CNN to identify non-landmark images
Ranked 76th in the competition (top 12%)

Machine learning, Pilot 2016 - 2017
AWS, Docker, Python, TensorFlow, Scikit-learn, Scrapy, Flask
Pilot is an automated trading platform, profitably trading the EUR/USD using neural networks on oanda.com.
- Signal processing, machine learning (RNN, deep reinforcement learning)
- RESTful API for serving my model's predictions on demand

Invited talks and Social Involvements

Model explanation with visual cues - Big Data Madison meetup	2018
Model explanation with visual cues - Big Data Wisconsin	2018
Paper reviewers committee - SIAM Artificial Intelligence in Insurance	2017
eMatcher: Database fuzzy matching - AFI Analytical Forum (company-wide)	2016
Recruitment at several career fairs	2011 - Now
Tutoring (Math)	2009 - Now