

# Dylan Labatt Randle

dylanrandle.github.io

Email : dylanrandle@g.harvard.edu

Mobile : +1-647-641-1994

## EDUCATION

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- **Harvard University, School of Engineering & Applied Sciences** Cambridge, MA  
*Master of Science in Data Science; GPA: 4.0* Sep 2018 – Present
- **University of California at Berkeley, College of Engineering** Berkeley, CA  
*Bachelor of Science in Industrial Engineering & Operations Research; GPA: 3.9* Sep 2012 – May 2016
  - **Awards:** High Honors, Phi Beta Kappa, Tau Beta Pi

## EXPERIENCE

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- **Institute of Applied Computational Science, Harvard University** Cambridge, MA  
*Research Assistant* Nov 2018 – Present
  - **Generative Adversarial Networks:** Researching GANs for generative modeling of solutions to ordinary and partial differential equations
  - **Machine Learning Turbulence:** Researched and developed neural network methods for unsupervised learning of solutions to Reynolds-Averaged Navier Stokes equations
- **Hubdoc, Inc. (acquired by Xero Ltd.)** Toronto, Canada  
*Lead Data Scientist* Jan 2017 – Jul 2018
  - **Production Deep Learning System:** Developed and deployed production deep learning system using LSTMs & CNNs for information extraction (i.e. entity recognition and classification) from financial documents. Greatly reduced labor costs (\$1-3MM/year) and increased speed of service (14,000x for 80% of documents). Tech stack: Python, Keras, Postgres, Ansible, AWS
  - **Business Analytics:** Conducted business analyses as needed: e.g. capacity planning of labor, anomaly detection of web scrapers, and prioritization of scraper maintenance. Built reports and data visualizations for intranet
  - **Management:** Regularly presented results and recommendations to C-suite. Integral in crafting team strategy and roadmap. Coordinated with product and marketing teams. Involved in fundraising and presentations to investors. Delivered machine learning lecture to 60+ people
- **Bank of Montreal, Capital Markets** Toronto, Canada  
*Financial Products Analyst* Summer 2014
  - **Fixed Income Derivatives:** Conducted analyses of various debt products (swaps, swaptions, ABS, MBS). Wrote custom C# algorithm to analyze relationship between delta-hedging frequency and returns for Canadian swaptions; found possible trading opportunities
  - **Sales & Trading:** Compiled daily summaries of trading activity. Reviewed and analyzed sales product pitches. Supported both sales and trading with various data analyses

## PROJECTS

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- **Automatic Differentiation:** Python package implementing automatic differentiation, supporting both forward and reverse modes
- **Spark Tensorflow:** Training neural networks with Tensorflow on a Spark/Hadoop-YARN cluster with AWS Elastic Map Reduce
- **Twitter Troll Classification:** Project achieving 96% accuracy classifying Twitter trolls using tweets scraped from accounts indicted for meddling in the 2016 U.S. elections
- **Bayesian Generative Adversarial Networks:** Paper review, implementation, and demo of Bayesian GANs

## PROGRAMMING SKILLS

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**Languages:** Python (numpy, pandas, scikit-learn, pytorch, keras, pymc3), SQL, C/C++

**Technologies:** AWS, Spark, MPI, OpenMP, OpenACC, Git, LaTeX