

# DYLAN LABATT RANDLE

+1-647-641-1994 ◊ [dylanrandle@g.harvard.edu](mailto:dylanrandle@g.harvard.edu) ◊ [dylanrandle.github.io](https://dylanrandle.github.io)

## EDUCATION

---

### Harvard University

Cambridge, MA

*M.S. in Data Science*

*Expected May 2020*

Relevant coursework: Advanced Data Science, Stochastic Methods for Optimization, Modeling and Inference, Systems Development for Computational Science, Computational Science Seminar

### University of California, Berkeley

Berkeley, CA

*B.S. in Industrial Engineering & Operations Research, High Honors*

*May 2016*

Relevant coursework: Statistics and Machine Learning, Probability, Forecasting, Mathematical Programming, Nonlinear and Discrete Optimization, Stochastic Processes

## RELEVANT EXPERIENCE

---

### Institute for Applied Computational Science, Harvard University

Cambridge, MA

*Research Assistant*

*Nov 2018 - Present*

- Researching methods to embed laws of physics into neural networks, for use in turbulence modeling. Supervised by Pavlos Protopapas and David Sondak

### Hubdoc, Inc

Toronto, Canada

*Data Scientist*

*Feb 2017 - July 2018*

- Developed and deployed deep learning system using LSTMs & CNNs for information extraction and text classification from financial documents. Greatly reduced cost (\$1-3MM/year) and increased speed (14,000x faster for 80% of documents) of results. Used Python, Tensorflow, Keras, AWS, PostgreSQL, Ansible
- Conducted analyses (work prioritization, labor allocation, anomaly detection) as needed. Built data visualizations for company intranet. Presented results and recommendations to management team. Delivered introductory machine learning lecture to audience of 60+ people

### BMO Capital Markets

Toronto, Canada

*Financial Products Analyst*

*May 2014 - Aug 2014*

- Conducted analyses of various debt products (swaps, swaptions, ABS, MBS). Wrote algorithm in C# to analyze relationship between delta-hedging frequency and returns for Canadian swaptions; found possible trading opportunities

## RELEVANT PROJECTS

---

**Twitter Troll Detection:** [https://dylanrandle.github.io/troll\\_classification](https://dylanrandle.github.io/troll_classification)

- Achieved 96% accuracy in classifying tweets as trolls, using a dataset of Twitter handles indicted for meddling in the 2016 U.S. presidential election

**Automatic Differentiation:** <https://github.com/dylanrandle/autograd>

- Built a Python package implementing automatic differentiation (forward and reverse mode). Used to implement gradient descent and Adam optimizers, with extensive documentation.

## TECHNICAL SKILLS

---

### Proficient

Python (numpy, pandas, scikit-learn, pytorch, tensorflow, pymc3), SQL, Git

### Familiar

Javascript, C++, MATLAB, Latex