DYLAN LABATT RANDLE

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EDUCATION

Harvard University, School of Engineering & Applied Sciences — Cambridge, MA
M.S. Data Science — *May 2020*
Applied Computation Scholarship, Special Distinction in Teaching
Thesis: Unsupervised Neural Network Methods for Solving Differential Equations

University of California at Berkeley, College of Engineering — Berkeley, CA
B.S. Industrial Engineering & Operations Research — *May 2016*
High Honors, Dean's Honors, Phi Beta Kappa, Tau Beta Pi

WORK EXPERIENCE

Amazon Robotics — North Reading, MA
Data Scientist, Intern — *Jun 2019 - Aug 2019*

- Built automated big data pipeline for querying, cleaning, transforming, and loading trillion-row datasets with PySpark on AWS EMR
- Developed machine learning (ML) package in Python for data exploration, modeling (training, validation, testing, visualization), hyperparameter tuning, and feature selection
- Reduced time and complexity of ML model development and analysis; documented and published code to internal repositories

Hubdoc, Inc. — Toronto, Canada
Data Scientist — *Jan 2017 - Jul 2018*

- Acquired by Xero for $70 million USD; first data scientist; hired and led team of two ML engineers
- Designed, developed, and deployed deep learning-based natural language processing (NLP) product for text classification and information extraction from financial documents
- Product praised by customers, leadership, and investors; significant piece of Hubdoc's value proposition at acquisition

Harvard University, School of Engineering & Applied Sciences — Cambridge, MA
Teaching Fellow — *Nov 2019 – May 2020*

- Introduction to Data Science (CS 109a); prepared lectures on boosting, neural networks, gradient descent, backpropagation, and regularization
- Computing Foundations for Computational Science (CS 205); instructor for labs on AWS, Docker, OpenMP, OpenACC, MPI, Hadoop, and Spark
- Recipient of Special Distinction in Teaching Award

RESEARCH & APPLIED PROJECTS

Unsupervised Neural Network Methods for Differential Equations

- Researched and developed methods for solving differential equations with unsupervised neural networks; formulated novel generative adversarial network (GAN) training algorithm leading to multiple orders of magnitude improvement over classical methods on multiple problems

Neural Architecture Search for Scientific Datasets

· Harvard data science capstone research project investigating differentiable neural architecture search (DARTS) for applications to scientific datasets; results and blog post on "Towards Data Science" viewed thousands of times

Deep Generative Modeling for Faces

· Project developing variational auto-encoder (VAE) generative models of images with convolutional neural networks; implemented ResNet VAE producing fairly realistic samples with conditional attributes which allow direct modification of output images

For all available work, see my website: `dylanrandle.github.io`

TECHNICAL SKILLS

Languages	Python (Pytorch, Tensorflow, Scikit-Learn, Pandas, Numpy, Scipy), SQL, C
Tools	Spark, Hadoop, Docker, Git, Jupyter, Latex, Markdown
Platforms	AWS (EC2, EMR, S3, Athena), MacOS, Linux

LEADERSHIP EXPERIENCE

Harvard Graduate Canadian Club — Cambridge, MA
Treasurer — *Sep 2019 - May 2020*

· Co-organized activities for Canadian graduate students at Harvard
· Met with leaders of Canadian Embassy in Boston
· Managed club finances, budget, and fundraising

Berkeley Industrial Engineering Honor Society — Berkeley, CA
Vice President — *Sep 2015 - May 2016*

· Co-organized recruiting events, research talks, and ceremonies
· Engaged students and faculty in program fostering research collaboration

AWARDS & RECOGNITIONS

Harvard University — Cambridge, MA
School of Engineering & Applied Sciences — *Aug 2018 - May 2020*

· Applied Computation Scholarship: $20,000 scholarship towards research in data science
· Special Distinction in Teaching: awarded for exemplary teaching and leadership during spring 2020

University of California, Berkeley — Berkeley, CA
College of Engineering — *Sep 2012 - May 2016*

· High Honors: top 10% of class at graduation
· Dean's Honors: top 10% of class in each semester (held throughout)
· Kraft Award: perfect (4.0) GPA entering sophomore year
· Phi Beta Kappa: national academic honor society
· Tau Beta Pi: national engineering honor society
· Alpha Pi Mu: national industrial engineering honor society

ADDITIONAL WORK EXPERIENCE

Taylor Statten Camps — Algonquin Park, Canada
Canoe Trip Guide — *Summers 2015, 2016*

· Co-leader of 36 and 50-day canoe trips through remote Canadian wilderness; responsible for groups of seven teenage boys
· Planned, led, and completed trips covering ∼3000 km of rugged wilderness by canoe and portage

BMO Capital Markets Toronto, Canada
Financial Products Analyst *May 2014 - Aug 2014*

· Conducted analyses of interest rate swaps and swaptions; developed algorithm to model relationship between returns and delta-hedging frequency
· Discovered potential market opportunities; results praised by fixed-income traders