DYLAN LABATT RANDLE

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EDUCATION

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

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

RELEVANT WORK EXPERIENCE

Amazon Robotics — North Reading, MA
Data Scientist II — *July 2020 - Present*

· Leveraging data science to improve automated fulfillment systems responsible for delivering billions of packages to customers across the globe

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; hired and led team of two data scientists
· 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; highly significant value-added element of acquisition by Xero; core technology now central to Xero's AI capabilities

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

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

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 profit-generating market opportunities; results praised by fixed-income derivatives traders

SELECTED 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; paper published on arXiv (2007.11133)

Interpretable Reinforcement Learning for Healthcare

- Leveraged imitation learning to train interpretable models guided by black-box policies for reinforcement learning problems in healthcare; results demonstrated potential of learning explicitly interpretable policies in high-stakes domains

Neural Architecture Search for Scientific Datasets

- Investigated differentiable neural architecture search (DARTS) for applications to scientific datasets; results highlighted necessity of careful hyperparameter tuning and underscored strength of random search; blog post viewed thousands of times

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

TECHNICAL SKILLS

Languages	Python (Numpy, Pandas, Scipy, Scikit-Learn, Pytorch, Tensorflow), SQL, C
Tools	Ray, Spark, Hadoop, Docker, Git, Jupyter, Latex, Markdown
Platforms	AWS (EC2, EMR, S3, Athena), MacOS, Linux
Methods	Machine & Deep Learning, Generative Models, Bayesian Inference, Optimization

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

Alpha Pi Mu, Berkeley Chapter — Berkeley, CA
Vice President — *Sep 2015 - May 2016*

- National industrial engineering honor society
- 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*

- Scholarship in Applied Computation: scholarship ($20,000) awarded for master's student research in applied computation (data science & computational science)
- Special Distinction in Teaching: department certificate awarded for exemplary teaching and leadership

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

- High Honors: awarded to top 10% of class (GPA) at graduation
- Dean's Honors: awarded to top 10% of class (GPA) in a semester (held throughout)
- Kraft Award: awarded for attaining maximum GPA (4.0) in freshman year
- Phi Beta Kappa: academic achievement recognized by national honor society (arts & sciences)
- Tau Beta Pi: academic achievement recognized by national honor society (engineering)
- Alpha Pi Mu: academic achievement recognized by national honor society (industrial engineering)

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