Yann Dubois

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Education

Stanford University
PhD in Machine Learning
- Honours: Knight-Hennessy Scholar

U.S.A.
Sep. 2020 - present

University of Cambridge, Trinity College
MPhil in Machine Learning and Machine Intelligence
- Grade: Distinction
- Honours: Department of Engineering Full Scholarship

U.K.
Oct. 2018 - Aug. 2019

École Polytechnique Fédérale de Lausanne (EPFL)
BSc in Biomedical Engineering
- Grade: 5.75 out of 6
- Honours: Best bachelor grades of the faculty
- Exchange: University of British Columbia, Canada (Sep. 2016 - May 2017). Grade: 93% (A+).

Switzerland
Sep. 2014 - May. 2017

Work Experience

Vector Institute
Researcher
- What: I led a research project on compression with respect to ML algorithms.
- Why: Most data is processed by algorithms yet standard compressors are optimized for human perception.

Canada
Nov. 2020 - Aug. 2021

Facebook AI Research
AI Resident
- What: I led a research project proposing representations for machine learning (ML) that are provably optimal. [1]
- Why: By using our optimal representations one could (theoretically) use ML in settings with very little data available.

U.S.A.
Sep. 2019 - Sep. 2020

The University of Amsterdam
Researcher
- What: I led a research project proposing a way to improve natural language processing in the extrapolation setting. [3]
- Why: ML fails when the task is too different from the train set (extrapolation), which hinders its applicability in the real world.

Netherlands
May 2018 - Oct. 2018

Grab
Data Scientist
- What: I was in charge of classifying reviews from 40 million users in languages including Thai, Vietnamese, Bahasa, Burmese, Thai, Khmer.
- Why: Grab is Asia Pacific's largest startup. As Southeast Asian languages are under-researched most ML methods under-perform on them.

Singapore
Oct 2017 - Apr. 2018

Sensible Building Science (SBS) and University of British Columbia
Applied Research Assistant
- What: I developed a method to predict room occupancy given the past and current number of devices connected to WiFi hotspots.
- Why: SBS is a start-up that decreases the energy consumption of large buildings (e.g. airports and universities) by using smart heating.

Canada
May 2017 - Oct. 2017

Swiss Institute of Bioinformatics
Research Assistant
- What: I developed a ranking algorithm used to analyze mutations of 183 infants suffering from Sepsis.
- Why: Sepsis is the world deadliest condition (11 million deaths/year, mostly in developing countries).

Switzerland
Feb. 2016 - Sep. 2016

Selected Publications

[1] (Spotlight) **Dubois Y.**, Kiela D., Schwab D., Vedantam R. "Learning Optimal Representations with the Decodable Information Bottleneck". NeurIPS 2020.

[2] Gordon J., Bruinsma W., Foong A., Requeima J., **Dubois Y.**, and Turner R. "Meta-Learning Stationary Stochastic Process Prediction with Convolutional Neural Processes". NeurIPS 2020.

[3] **Dubois Y.**, Dagan Y., Hupkes D., Bruni E. "Location Attention for Extrapolation to Longer Sequences". ACL 2019.

[4] (Oral) Gordon J., Bruinsma W., Foong A., Requeima J., **Dubois Y.**, and Turner R. "Convolutional Conditional Neural Processes". ICLR 2019.

Miscellaneous

Languages	French (native); Polish (native); English (C2); German (B2); Italian (B2).
Leadership	Founder and president of an association uniting students from Lausanne; Silicon Valley Startup Camp for Swiss entrepreneurs.
Sports	Lausanne's Marathon (4th junior); volleyball (Cambridge Univeristy team); PADI rescue scuba diver; bouldering; skiing.
Teaching	Teaching Assistant at EPFL for Real Analysis, Multivariate Analysis, Biology. More than 300 students in total.
Writing	Neural Process Family (`yanndubs.github.io/Neural-Process-Family`); ML Glossary (`yanndubs.github.io`).
Open Source	Winner of the NIPS 2017 Implementation Challenge (`github.com/YannDubs/Hash-Embeddings`).
Invited Talks	"Learning Optimal Representation", Courant Institute, New York University, 12 Oct. 2020.
	"Learning Optimal Representation", Department of Statistical Sciences, University of Toronto, 14 Oct. 2020.