Yann Dubois

yannd@fb.com

+1 650 505 71 67

Blog: yanndubs.github.io

Ch. Aux Channey 20

1077 Servion, Switzerland

GitHub: github.com/YannDubs

Education

2018 – 2019   **The University of Cambridge**, Trinity College, UK

MPhil in Machine Learning and Machine Intelligence

Grade: Distinction
Honours: Department of Engineering Scholarship

2016 – 2017   **The University of British Columbia (UBC)**, Canada

BSc in Machine Learning and Computer Science. Full year exchange program from EPFL.

Grade: 93% (A+)

2014 – 2017   **École Polytechnique Fédérale de Lausanne (EPFL)**, Switzerland

BSc in Bioengineering and Technologies.

Grade: 5.75 out of 6
Honours: Best bachelor grades of the faculty

Research Experience

Sep. 2019 – Now   **AI Resident - Facebook Artificial Intelligence Research**, USA

Supervisors: Dr. Ramakrishna Vedantam, Dr. Douwe Kiela

Topics: Self-supervised representation learning, information theory, science of deep learning

- Investigating new measures of statistical dependencies that can be used to better understand self-supervised representation learning methods and generalization in deep learning.

May 2018 – Oct. 2018   **Research Assistant**, ILLC - **The University of Amsterdam**, Netherlands

Topic: Deep Natural Language Processing - Specialising Attention Mechanisms.

- Enabled extrapolation to longer sequences by splitting content and position attention.

May 2017 – Oct. 2017   **Research assistant, UBC** and **Sensible Building Science**, Canada

Topic: Machine Learning - Real-world multi-step forecasting of multi-dimensional time series.

- Developed an improved ARIMA, more appropriate for multi-step forecasting.
- Implemented for a company predicting room occupancy to improve energy efficiency.

Feb. 2016 – Sep. 2016   **Research assistant, Swiss Institute of Bioinformatics**, Switzerland

Topic: Computational genomics - optimising whole exome sequencing pipelines.

- Developed a sample-efficient ranking algorithm for genetic variants.
- The algorithm was used to analyse 183 infants suffering from severe sepsis.

Jul. 2015 – Sep. 2015   **Summer student researcher, EPFL**, Switzerland

Topic: Neuroscience - link between stress induced glucocorticoid and behaviour.

Relevant Professional Experience

Oct. 2017 -   **Data Scientist Trainee, Grab**, Singapore

Apr. 2018	Company: Asia Pacific's largest start-up (~40 million users), mostly known for ride-hailing.

- In charge of classifying 40'000 daily reviews in Thai, Vietnamese, Bahasa, English...
- Put into production an algorithm which achieved a 20% F1-score improvement.
- Built a general NLP pipeline for the company: the core of the work was to train a sentence embedder in a semi-supervised, multi-task and language independent setting.

Sep 2015 – Jul. 2016	**Teaching assistant for Analysis I and II, EPFL**, Switzerland. Real and multivariable analysis. 20-30 undergraduates.
Sep 2015 – Jan. 2016	**Teaching assistant for Biology, EPFL**, Switzerland 70-80 undergraduates.

Relevant Writing

- (*Accepted to ICLR 2020*) J. Gordon*, W. Bruinsma*, A. Foong, J. Requiema, **Y. Dubois**, R. Turner. Convolutional Conditional Neural Processes.
- (*Submitting to ACL 2020*) **Y. Dubois**, G. Dagan, D. Hupkes, E. Bruni. Location Attention for Extrapolation to Longer Sequences.
- Machine Learning blog and glossary: yanndubs.github.io . Since Oct. 2017.
- **Y. Dubois**. Extending Neural Processes to the Wild : A Semi-Supervised Method for Non-Standard Data Format. Unpublished MPhil dissertation, 2018.
- **Y. Dubois***, A. Kastanos*, D. Lines*, B. Melman*. Understanding Disentangling in VAE. Poster presented at: University of Cambridge – Advanced Machine Learning.
- K. Askelson*, S. Blain*, **Y. Dubois***, K. Jepson*, M. Kinney*, G. McCarthy*. Express Yourself: Exploring miRNA expression in HL-60 cells following ATRA-induced differentiation. Poster presented at: UBC - Methods for High Dimensional Biology, 2017.

Most Relevant Side Projects

Mar. 2019 - May 2019	**Disentangling in VAE** Comparing and improving disentangling: https://github.com/YannDubs/disentangling-vae
Dec. 2017 - Jan. 2018	**Global NIPS 2017 Paper Implementation Challenge: Hash-Embeddings** Won the challenge by successfully replicating and improving: "Hash Embeddings for Efficient Word Representations". Code: github.com/YannDubs/Hash-Embeddings.

Skills

Descending	**Programming**: Python (ML/DL/RL libraries), C++, Matlab, R, Bash , SQL.
Order	**Languages**: French (native), Polish (native), English (C2), German (B2), Italian (B1).

Miscellaneous

2015– 2016	**Association LBC**, Switzerland Co-founder and President. Association which unites students from various universities.
Aug 2016	**BCV Silicon Valley Start-up Camp – Young Entrepreneurs**, USA
Oct. 2015	**Runner, 4th junior (3h20), Lausanne's Marathon**, Switzerland