# Lucio Dery

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ldery.github.io

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• https://github.com/ldery

#### **EDUCATION**

Carnegie Mellon University

PhD in Computer Science Expected Graduation: June 2024

Stanford University

Stanford, CA MS in Computer Science \*\* Tau Beta Pi Sept 2016 - June 2018

Stanford University

Stanford, CA

BS in Physics + Minor in Computer Science \*\* With Distinction

Sept 2013 - June 2018

Pittsburgh, PA

#### RESEARCH INTERESTS

o Natural Language Processing, Meta-Learning, Multitasking, Weak Supervision

### PUBLICATIONS / TALKS

Journal Papers.....

o Dery, Lucio Mwinmaarong, et al. "Weakly supervised classification in high energy physics." Journal of High Energy Physics 2017.5 (2017): 1-11 [Paper] [Code]

Conference Papers.....

- o Lucio M. Dery, Paul Michel, Ameet Talwalkar, Graham Neubig. "Should We Be Pre-training? An Argument for End-task Aware Training as an Alternative" ICLR, 2022 [Paper]
- o Lucio M. Dery, Yann Dauphin, David Grangier. "Auxiliary task update decomposition: the good, the bad and the neutral". ICLR, 2021 [Paper][Code]
- o Eli Shlizerman, Lucio Dery, Hayden Schoen, Ira Kemelmacher. "Audio to Body Dynamics." CVPR, 2018 [Paper][Code][Press]
- o D.A-Huang, Shyamal Buch, Lucio Dery, Animesh Garg, Li Fei-Fei, Juan Carlos Niebles. "Finding 'It': Weakly-Supervised Reference-Aware Visual Grounding in Instructional Video." CVPR, 2018 (Oral)[Paper][Code]

Under Submission.

o Lucio M. Dery, Paul Michel, Mikhail Khodak, Graham Neubig, Ameet Talwalkar. "AANG: Automating Auxiliary Learning" (under submission)

- o 2018 Black In A.I Workshop. Neural Information Processing Systems (NeurIPS), Invited Talk
- o 2017 International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT), Poster Presentation
- o 2017 Black In A.I Workshop. Neural Information Processing Systems (NIPS), Poster Presentation

#### INDUSTRY EXPERIENCE

DeepMind London, UK

Research Scientist Intern May 2022 - August 2022

Google Brain - Google Remote

- o Leveraged out-of-distribution data via Gradient Alignment
- o Examined auxiliary task gradients within subspace spanned by primary task gradients

#### Facebook A.I Research - Facebook

Seattle, WA

Research Engineer

July 2018 - July 2019

- o Studied learning Neural Knowledge Graphs by Generating Wikipedia
- o Probed Commonsense and World Knowledge Capabilities of State-of-the-Art Co-reference Models
- Open-sourced Audio to Body Dynamics
- o Contributed to FAIRSEQ

#### Applied Machine Learning - Facebook

Seattle, WA

Software Engineering Intern

June 2017 - August 2017

- o Worked on Audio-Visio Multimodal Learning for understanding human mannerisms
- o Developed recurrent architecture for learning transformations from audio features to body key-points

#### Terra Bella - Google

Mountain View, CA

Software Engineering Intern

June 2016 – August 2016

- Applied unsupervised learning techniques to Satellite images to cluster similar socio-economic regions and detect changing regions over time
- Extensive feature engineering through experimentation with remote sensing signal spaces like NDVI (Normalized Difference of Vegetation Index), MSAVI and NDBI
- Built Tensor Flow model that utilized Inception V3 featurization of remote sensing signal spaces to automatically identify similar regions like Golf Courses or Airports within and across cities

#### Google Analytics - Google

Mountain View, CA

Engineering Practicum Intern

June 2015 - August 2015

- o Conducted background experimentation and comparative performance visualizations in R on time series prediction algorithms in Analytics libraries against third party algorithms
- o Implemented Autoregressive Integrated Moving Averages (ARIMA) time series forecasting. Resulting implementation was on average faster than R implementation and of comparable accuracy
- o Exposed ensemble mode API that allows developers to use suite of forecasting algorithms

#### TEACHING EXPERIENCE

- o Section Leader, Stanford Code In Place, Spring 2020
- o Computer Vision Instructor, African Masters in Machine Intelligence, Summer 2019
- o Head Teaching Assistant, Deep Learning (CS230) Stanford University, Spring 2018
- o Course Assistant, Deep Learning (CS230), Stanford University, Winter 2018
- o Course Assistant, Machine Learning (CS229), Stanford University, Autumn 2017
- o Section Leader, Programming Methodology (CS106A), Stanford University, 2014 2017
- o Section Leader, Programming Abstractions (CS106B), Stanford University, 2014 2017
- o Summer School Instructor, Enza Academy, Summer 2015

## HONORS / AWARDS

- o 2<sup>nd</sup> Place Two Sigma Diversity PhD Fellowship
- o Stanford Chapter Tau Beta Pi Honor Society
- Stanford Black Community Center Award for Academic Excellence
- Stanford Center for African Studies Leadership and Service Award
- Stanford Computer Science Department TA Award (\$1000 awarded to top 5% of Course Assistants in Spring 2018)
- 3rd Best Student, West African Senior Secondary Certificate Examination (out of over 2.5 million students from Anglophone West Africa in 2013)
- o 2nd Place, Ghana National Math and Science Olympiad (out of 32 Selected Schools)

# **SERVICE**

- ${\color{red} \circ}$  Reviewer ICLR 2022, ICML 2022
- o Graduate School Application Mentorship Black In AI
- $\circ\,$  Mock Interviewer Underrepresented minorities seeking Software Engineering Roles