Adji Bousso Dieng

Columbia University
Department of Statistics
1255 Amsterdam Avenue
New York, NY 10027

Email: abd2141 at columbia dot edu
Homepage: http://stat.columbia.edu/diengadji/
Github: https://github.com/adjidieng
LinkedIn: https://www.linkedin.com/in/diengadji45

Education

Ph.D in Statistics, Columbia University   2014 – Present
Advisors: David Blei, John Paisley

Master in Applied Statistics, Cornell University   Jan 2012 – May 2013
Advisors: David Lifka, Martin Wells

Diplome d'Ingenieur, Telecom ParisTech   Sep 2009 – May 2013
France's "Grandes Ecoles "

Lycee Henri IV (France's "Classes Preparatoires aux Grandes Ecoles")   Sep 2006 – June 2009

Employment

Research Intern   September 2018 – January 2019
DeepMind, London, UK
Supervisor: Lei Yu

Research Intern   May 2018 – August 2018
Facebook AI Research, New York, NY
Supervisor: Yann LeCun

Research Intern   June 2017 – Sep 2017
Microsoft AI & Research, Redmond, WA
Supervisors: Chong Wang, Jianfeng Gao

Research Intern   June 2016 – Sep 2016
Deep Learning Technology Center, Microsoft Research, Redmond, WA
Supervisors: Chong Wang, Jianfeng Gao

Junior Professional Associate   June 2013- July 2014
Market and Counterparty Risk Department
The World Bank, Washington, DC

Intern   Jan 2013 – May 2013
Doing Business Team
International Finance Corporation, Washington, DC

Research Intern   May 2012 – Aug 2012
Weill Cornell Medical College, New York, NY
Supervisor: Martin T. Wells

Publications & Preprints

A. B. Dieng, F. J. R. Ruiz, D. M. Blei, and M. Titsias. *Prescribed Generative Adversarial Networks.* Under Review at Journal of Machine Learning Research (JMLR).

A. B. Dieng and J. Paisley. *Reweighted Expectation Maximization.* Under Review at Journal of Machine Learning Research (JMLR).
Link: https://arxiv.org/abs/1906.05850

A. B. Dieng, F. J. R. Ruiz, and D. M. Blei. *Topic Modeling in Embedding Spaces.* Under Review at Transactions of the Association for Computational Linguistics (TACL).
Link: https://arxiv.org/abs/1907.04907

A. B. Dieng, F. J. R. Ruiz, and D. M. Blei. *The Dynamic Embedded Topic Model.* Under Review at International Conference on Artificial Intelligence and Statistics (AISTATS).
Link: https://arxiv.org/abs/1907.05545

A. B. Dieng, K. Cho, D. M. Blei, and Y. LeCun. *Learning with Reflective Likelihoods.*
Link https://openreview.net/pdf?id=SJlh2jR9FX.

D. Tran, A. Kucukelbir, **A. B. Dieng**, M. Rudolph, D. Liang, and D.M. Blei. *Edward: A Python library for probabilistic modeling, inference, and criticism.*
Link: https://arxiv.org/abs/1610.09787

A. B. Dieng, Y. Kim, A. M. Rush, and D. M. Blei. *Avoiding Latent Variable Collapse With Generative Skip Models.* Artificial Intelligence and Statistics (AISTATS), 2019.
Link: https://arxiv.org/abs/1807.04863

A. B. Dieng, Y. Kim, A. M. Rush, and D. M. Blei. *Avoiding Latent Variable Collapse With Generative Skip Models.* Workshop on Theoretical Foundations and Applications of Deep Generative Models, ICML, 2018.
Link: https://arxiv.org/abs/1807.04863

A. B. Dieng, R. Ranganath, J. Altosaar, and D. M. Blei. *Noisin: Unbiased Regularization for Recurrent Neural Networks.* International Conference on Machine Learning (ICML), 2018.
Link: https://arxiv.org/abs/1805.01500

F. R. Ruiz, M. Titsias, **A. B. Dieng**, and D. M. Blei. *Augment and Reduce: Stochastic Inference for Large Categorical Distributions.* International Conference on Machine Learning (ICML), 2018.
Link: https://arxiv.org/abs/1802.04220

D. Ciao, T. Ma, **A. B. Dieng**, D. M. Blei, and F. Wang. *Readmission Prediction via Deep Contextual Embedding of Clinical Concepts.* Plos One, 2018. Named as one of the **best articles published in 2018 on clinical information systems** by the International Medical Interpreters Association (IMIA).

A. B. Dieng, C. Wang, J. Gao, and J. W. Paisley. *TopicRNN: A Recurrent Neural Network with Long Range Semantic Dependency.* International Conference on learning Representation (ICLR), 2017.
Link: https://arxiv.org/abs/1611.01702

A. B. Dieng, D. Tran, R. Ranganath, J. W. Paisley and D. M. Blei. *Variational Inference via χ Upper Bound Minimization.* Neural Information Processing Systems (NIPS), 2017.
Link: https://arxiv.org/abs/1611.00328

Talks & Panels

Carnegie Mellon University Machine Learning Seminar, Pittsburgh, PA	November 2019
University of California Berkeley EECS Seminar, Berkeley, CA	October 2019
IPAM Workshop on Interpretable Learning in Physical Systems, Los Angeles , CA	October 2019
Deep Learning Indaba, Two-Hour Lecture on Deep Generative Models, Nairobi, Kenya	August 2019
Deep Learning Indaba, Women in Machine Learning and AI, Nairobi, Kenya (panel)	August 2019
Yahoo Research Seminar Series, New York, NY	July 2019
New York Machine Learning and Artificial Intelligence Meetup, New York, NY	June 2019
Latinx in AI and Black in AI joint Workshop, ICLR 2019, New Orleans, LA (keynote)	May 2019
NYU Text as Data Seminar Series, New York, NY	March 2019
NYAS Machine Learning Symposium, New York, NY (short spotlight talk)	March 2019
South England Natural Language Processing Meetup, UK	January 2019
Microsoft Research Cambridge, Cambridge, UK	January 2019
International Conference on Machine Learning, Sweden	July 2018
Columbia University Data Science Institute Student Seminar, New York, NY	April 2018
Columbia University Minghui Memorial Conference, New York, NY (short talk)	April 2018
Tufts University CS Colloquium, Medford, MA	April 2018
Harvard University NLP Group Meeting, Cambridge, MA	April 2018
Stanford University NLP Seminar, Stanford, CA	April 2018
NYAS Machine Learning Symposium, New York, NY (short spotlight talk)	March 2018
Women Techmakers 2018 Summit, Google, New York, NY (Panel)	Mach 2018
Machine Learning and Friends Seminar, UMass, Amherst, MA	February 2018
Black in AI Workshop, Long Beach, CA (short spotlight talk)	December 2017
MSR AI, Microsoft Research, Redmond, WA	August 2017
SSLI Lab, University of Washington, Seattle, WA	August 2017
DeepLoria, Loria Laboratory, Nancy, France	April 2017
AI With The Best, Online	April 2017
Columbia University Minghui Memorial Conference, New York, NY (short talk)	April 2017
OpenAI, San Francisco, CA	January 2017
IBM TJ Watson Research, Yorktown Heights, NY	December 2016

Awards & Honors

Rising Star in Machine Learning (University of Maryland) 2019–

Google PhD Fellowship in Machine Learning ($35,000 + Tuition and Fees) 2019–

Google sponsored talk award at New York Academy of Sciences ML Symposium March 2018

Open Philanthropy Project AI Fellowship, Finalist February 2018

Conference Travel Awards (ICML 2018, NeurIPS 2017, ICLR 2017)

Microsoft Azure Research Award ($20K Azure Credit) November 2016 – November 2017

Columbia University Dean Fellowship (Full Funding) August 2014 – Present

Cornell Institute for African Development Fellowship (Full Tuition) August 2013 – May 2013

Pathfinder Foundation Scholarship (€ 60K to study abroad) 2007 – 2011

Senegalese Government Excellence Scholarship 2006 – 2010

Laureate du Concours General (Senegalese Olympiad, Philosophy) July 2006

Professional Service & Leadership

Area Chairing

Women in Machine Learning Workshop, collocated with NeurIPS 2019

Black in AI Workshop, collocated with NeurIPS 2019

Journal Reviewing

IEEE Transactions on Neural Networks and Learning Systems 2018

Foundations and Trends in Machine Learning 2016

Conference Reviewing

Conference on Empirical Methods In Natural Language Processing (EMNLP) 2019

Association for Uncertainty in Artificial Intelligence (UAI) 2019

Association for the Advancement of Artificial Intelligence (AAAI) 2019

Artificial Intelligence and Statistics (AISTATS) 2018

International Conference on Learning Representations (ICLR) 2018

International Conference on Machine Learning (ICML) 2017, 2018

Neural Information Processing Systems (NeurIPS) 2016, 2017, 2018, 2019

Workshop Reviewing

Methods for Optimizing and Evaluating Neural Language Generation Workshop 2019

Advances in Approximate Bayesian Inference Workshop 2018

Black in AI Workshop 2018

Professional Membership

Association for Computing Machinery

Association for Women in Mathematics

Bernoulli Society

Institute for Mathematical Statistics

American Statistical Association

Workshop & Symposium Organization

Deep Generative Models for Highly Structured Data Workshop (ICLR) 2019
A. B. Dieng, Y. Kim, S. Reddy, K. Cho, C. Dyer, P. Blunsom, and D. M. Blei.
Website: `https://deep-gen-struct.github.io/`

Symposium on Advances in Approximate Bayesian Inference 2019
T. Bui, A. B. Dieng, D. Liang, F. J. R. Ruiz, and C. Zhang
Website: `http://approximateinference.org/`

Volunteering

Advisor – Science Meets Engineering of Deep Learning Workshop (SEDL), NeurIPS 2019

Deep Learning Indaba Awards Committee 2019

Mentor – Mentorship Roundtable – Women in Machine Learning Workshop (WiML) 2017

Student Volunteer – International Conference on Learning Representations (ICLR) 2017

Student Mentorship

Samarth Sinha, University of Toronto 2019–

Teaching

Teaching Assistant, Columbia University
Statistical Machine Learning Spring 2019

Teaching Assistant, Columbia University
Advanced Data Analysis Fall 2017

Teaching Assistant, Columbia University
Statistical Methods for Finance Spring 2016

Teaching Assistant, Columbia University
Probability and Statistics for Data Science   Fall 2015

Teaching Assistant, Columbia University
Linear Regression Models   Spring 2015

Teaching Assistant, Columbia University
Probability   Fall 2014

Communication Skills

Human Languages: Wolof(Native), French(Native), English(Fluent).

Machine Languages: Python (Pytorch, Tensorflow, Numpy, Scipy, PySpark), R(Stan), C#, Java, SQL.

Big Data Technologies: AWS, Azure.

Version Control: Git, SVN.