Avner May

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EDUCATION

Stanford University — **Stanford, CA**
Postdoctoral Scholar — ***Jan. 2018 - July 2020***
Advisor: Christopher Ré

Columbia University — **New York, NY**
MS/PhD in Computer Science — ***Sept. 2011 - Dec. 2017***
GPA: 4.07/4.00
Advisor: Michael Collins
Honors: Recipient of the Department Chair's Distinguished Fellowship
Teaching: Course Assistant for "Computer Networks", and "Challenges in Cloud and Mobile Computing"
Relevant Courses: Machine Learning, Adv. Machine Learning, Statistical Inference, Foundations of Graphical Models.

Harvard University — **Cambridge, MA**
Bachelor of Arts in Mathematics, Secondary Field Computer Science — ***June 2009***
GPA: 3.60/4.00
Honors: Certificate of Distinction in Teaching (Spring 2008).
Teaching: Course Assistant for Multivariable Calculus
Relevant Courses: Intro. to CS I/II, Theory of Computation, Data Structures & Algorithms, Efficient Algorithms, Probability Theory.

Charles E. Smith Jewish Day School — **Rockville, MD**
GPA: 4.54/4.00 (highest in graduating class) — ***Feb. 2005***

PUBLICATIONS

Contextual Embeddings: When are they worth it?
S. Arora*, **A. May***, J. Zhang, C. Ré. ACL 2020.

Understanding the Downstream Instability of Word Embeddings.
M. Leszczynski, **A. May**, J. Zhang, S. Wu, C. Aberger, C. Ré. MLSys 2020.

On the Downstream Performance of Compressed Word Embeddings.
A. May, J. Zhang, T. Dao, C. Ré. NeurIPS 2019 (Spotlight, 3% acceptance).

Low-Precision Random Fourier Features for Memory Constrained Kernel Approximation.
J. Zhang*, **A. May***, T. Dao, C. Ré. AISTATS 2019.

Kernel Approximation Methods for Speech Recognition.
A. May, A.B. Garakani, Z. Lu, D. Guo, K. Liu, A. Bellet, L. Fan, M. Collins, D. Hsu, B. Kingsbury, M. Picheny, F. Sha. JMLR 2019.

Compact Kernel Models for Acoustic Modeling via Random Feature Selection.
A. May, M. Collins, D. Hsu, B. Kingsbury. ICASSP 2016.

A Comparison Between Deep Neural Nets and Kernel Acoustic Models for Speech Recognition.
Z. Lu, D. Guo, A.B. Garakani, K. Liu, **A. May**, A. Bellet, L. Fan, M. Collins, B. Kingsbury, M. Picheny, F. Sha. ICASSP 2016.

Filter & follow: How social media foster content curation.
A. May, A. Chaintreau, N. Korula, S. Lattanzi. SIGMETRICS 2014.

WORK EXPERIENCE

Google Speech Recognition Group — **New York, NY**
Research Scientist — ***Oct. 2020 -***
I am a member of the audio-visual speech recognition group, working on research to better transcribe and summarize video meetings.

Google Research – Large Scale Machine Learning Research Group — **New York, NY**
Research Intern — ***Summer 2015***
Worked on model compression, a research area which attempts to train more compact models in the case where larger more powerful models already exist. Performed experiments using Torch.

Microsoft Research – Speech and Dialogue Research Group — **Redmond, WA**
Research Intern — ***Summer 2014***
Worked on training acoustic models from the raw speech signal. Specifically, was interested in seeing whether it was possible to train the matrices which perform the Fourier transform and mel-binning, as part of the classical MFCC feature extraction pipeline. Performed extensive experiments with, and made large improvements to, the Computational Network Toolkit (CNTK), an open-source C++ machine learning toolkit developed by MSR.

Microsoft Corporation – Windows Communication Foundation (WCF) — **Redmond, WA**
Software Development Engineer — ***Aug. 2009 - July 2011***
Developer on the Messaging Framework Team. Designed and implemented features to facilitate the development of distributed applications.
Honors: Received "Gold Star Bonus Award" for contributions to team.

Microsoft Corporation – Windows Workflow Foundation (WF) — **Redmond, WA**
Software Development Engineer Intern — ***Summer 2008***
Designed and implemented program for validating Windows Workflow programs. Integrated it with Microsoft Visual Studio.

Harvard University – Mathematics Department — **Cambridge, MA**
Course Assistant for Math 23b: Linear Algebra and Real Analysis II — ***Spring 2008***
Led weekly review of material covered in class. Held weekly office hours.
Honors: Awarded "Certificate of Distinction in Teaching" based on student evaluations.

University of Maryland – Granular Physics Lab — **College Park, MD**
Research Assistant — ***Summer 2007***
Conducted research in granular physics with Professor Wolfgang Losert. Studied the propagation of avalanches in excitable media using the tools of image processing. Programmed extensively in IDL (interactive data language).

The Inter-American Development Bank (IDB) — **Washington, DC**
Knowledge Intern — ***Summer 2006***
Worked as part of a team in the Development Effectiveness and Strategic Planning Department to revamp IDB's Project Alert Identification System (PAIS). Created a strategic proposal with recommendations for improving this system.

COMMUNITY SERVICE

Reviewer for ICLR 2018, ICML 2017-2020 (2019 Top Reviewer), NeurIPS 2017-2019, ICJAI 2019-2020 (2019 Distinguished PC member), AAAI 2020.

SKILLS

Computer: Python, PyTorch, Matlab, Java, C#, Linux, C, C++, CUDA.
Language: ***Spanish:*** Native speaker. **Hebrew**: Proficient.