



Machine Learning

Machine Learning: Jordan Boyd-Graber
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CULTURE

Project

- Wednesday: Workshop
- Following Tuesday: Presentations
 - 9 Minutes
 - 2 Minutes for questions
 - Motivate!
 - Baselines!
 - Don't dwell on what took the most time

Course Eval

- It's my grade
- Complain about things that need to be changed (e.g., TA)
- Be nice

A Sociological Perspective on ML

- How to write a paper (also useful for project)
- What are the major conferences
- Major journals
- What are the major schools
- What are the major companies
- What are the major sects

Reader 1: Lazy (but brilliant) Reviewer

- Informative section titles
- Takeaways in captions
- Bolding to find important points
- Cite accurately and extensively

Reader 2: Replicator / Thorough Reviewer

- Don't underspecify technical details
- Source code is best, but don't rely on it
- Don't give a whiff of "cheating"

Reader 3: Lay (Dumb) Reader

- Don't make overly broad claims
- Give the big picture
- Give examples of how it could be used in real life
- Give examples of what it does as black box (input / output)
- If you must use jargon, make sure there's reference

What kind of paper is it?

- First or best?
- Method / Data / Analysis?
- Why will people cite it next week, next year, next century?

Evidence

- Choose impossible to screw up baselines
- Set things up well: don't rely on equations
- Quantitative: Error bars
- Qualitative: Random examples

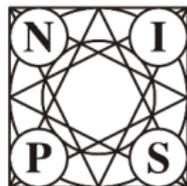
Don't do stupid stuff

- Use language precisely
- Use language correctly
- Use the right tools

Conferences

- ICML
- NIPS
- ACL
- EMNLP
- CVPR
- INTERSPEECH

- IJCAI
- AAAI
- AISTATS
- ICLR



Journals

- MLJ
- JMLR
- TACL



JMLR

Schools



- Stanford
- UW
- Columbia
- CMU
- MIT
- TTI/Chicago

Schools



- Maryland
- Stanford
- UW
- Columbia
- CMU
- MIT
- TTI/Chicago

Companies: 1990s

Twentieth Century

- 1990s
 - Microsoft
 - AT&T
- 2000s
 - Google
 - Microsoft
 - Yahoo!

Twenty-First Century

- 2010s
 - Google
 - Facebook
 - Amazon
 - Microsoft

Sects

- Max-Margin
- Theoretical
- Deep
- Bayesian
- Reinforcement

Max-Margin

Vladimir Vapnik,
FB/Columbia



Bernhard Schölkopf,
MPI



Corrina Cortes,
Google



Discriminative Probabilistic

Andrew McCallum, UMass



Mike Collins, Columbia



Theoretical

Les Valiant, Harvard



Rob Schapire, Microsoft



Deep

Geoff Hinton, Google / Toronto



Yann LeCun, Facebook / NYU



Probabilistic Networks

Daphne Koller, Stanford/Coursera



Judea Pearl, UCLA

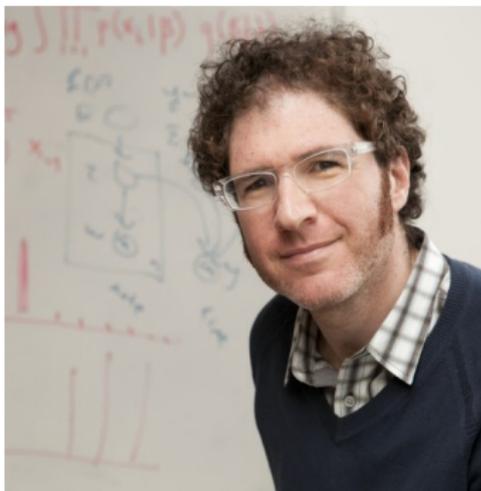


Bayesian

Mike Jordan, Berkeley



Dave Blei, Columbia



Reinforcement

Leslie Kaelbling, MIT



Mike Littman, Brown



Rising Stars



- Percy Liang, Stanford
- Yisong Yue, Caltech
- David Mimno, Cornell
- Tamara Broderick, MIT
- Kyunghyun Cho, NYU

ML is fun!

- Meetups
- Classes
- Kaggle