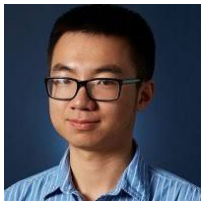
CS294-158 Deep Unsupervised Learning

Lecture 1a: Logistics

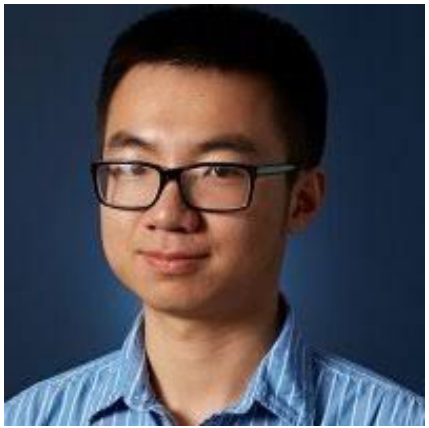



Pieter Abbeel, Peter Chen, Jonathan Ho, Aravind Srinivas

UC Berkeley

Instructor Team

Pieter Abbeel



Peter Chen

Jonathan Ho

Aravind Srinivas

Syllabus

Week 1 (1/30)

Lecture 1a: Logistics

Lecture 1b: Motivation

Lecture 1c: Likelihood-based Models Part I: Autoregressive Models

Lecture 1d: Compression

Week 2 (2/6)

Lecture 2a: Likelihood-based Models Part I: Autoregressive Models (ctd)

Lecture 2b: Likelihood-based Models Part II: Flow Models

Week 3 (2/13)

Lecture 3: Latent Variable Models

Week 4 (2/20)

Lecture 4a: Latent Variable Models (ctd)

Lecture 4b: Implicit Models

Week 5 (2/27)

Lecture 5a: Implicit Models (ctd)

Week 6 (3/6)

Lecture 6: Non-Generative Representation Learning

Week 7 (3/13)

Lecture 7a: Non-Generative Representation Learning (ctd)

Lecture 7b: Semi-supervised Learning

Week 8 (3/20)

Lecture 8: Representation Learning + Other Problems

Spring Break Week (3/27)

you are on your own :)

Week 9 (4/3)

Lecture 9a: Unsupervised Distribution Alignment

Lecture 9b: Guest Lecture: Ilya Sutskever

Week 10 (4/10)

Lecture 10a: Unsupervised Distribution Alignment (ctd)

Lecture 10b: Guest Lecture: Durk Kingma

Week 11 (4/17)

Lecture 11: Language Models (Alec Radford)

Week 12 (4/24)

Lecture 12: Unsupervised RL

Week 13 (5/1)

Lecture 13a: TBD

Lecture 13b: Guest Lecture Aaron van den Oord

Week 14 (5/8)

RRR week: no lecture

Week 15 (5/15)

Final Project Presentations

Grading Logistics

50% Homework (TBD how many, likely 3-5, tentative sketch)

- HW1: Autoregressive Models; HW2: Flow Models
- HW3: Latent Variable Models; HW4: Implicit Models

50% Final Project

- More info forthcoming
- In meantime: ideally your Final Project covers interesting new ground and might be the basis for a future conference paper submission or for a practical product.

Admission into the Course

- Based on:
  - Application (see website)
  - HW1
  - Attendance
- Timeline:
  - HW1 due 2/11, so hopefully few days after that
- To reduce uncertainty, we'll also look at applications over weekend and try to classify everyone into:
  - Conditional admit [strong HW1 + attendance gets you in]
  - On the bubble [strongly dependent on HW1, and also how many spots left]
  - Unlikely to get in [but you never know]
  - Not right background

Communication

- Piazza
  - Note: we'll tie it all to berkeley.edu addresses
  - If that gets you (temporarily) kicked out, contact us from your berkeley.edu address and we'll re-add you

- cs294-158-staff@lists.berkeley.edu (reaches all 4 instructors)

Office Hours

- Pieter: Thursdays 9-10am, 746 Sutardja Dai Hall
  - Exception, this week: catch me after lecture today
- Peter:
- Jonathan:
- Aravind:

WARNING

First offering of this course

There will be some rough edges, please bear with us + give feedback!