

CS 189  
Spring 2020Introduction to  
Machine Learning

## Answer Sheet

- You **must** read carefully the instructions for online exams at [this Piazza post](#) **well in advance**.
- Please write your name at the top of each page. (You may do this before the exam.)
- You have 80 minutes to complete the midterm exam (6:40–8:00 PM). (If you are in the DSP program and have an allowance of 150% or 200% time, that comes to 120 minutes or 160 minutes, respectively.)
- When the exam ends (8:00 PM), **stop writing**. You have 15 minutes to scan the exam and turn it into Gradescope. You must remain visible on camera while you scan your exam and turn it in. Most of you will use your cellphone and a third-party scanning app. If you have a physical scanner in your workspace that you can make visible from your webcam, you may use that. Late exams will be penalized at a rate of 10 points per minute after 8:15 PM. (The midterm has 100 points total.) Continuing to work on the exam after 8:00 PM (or not being visible prior to submission) **may incur a score of zero**.
- Mark your answers on the exam itself in the space provided. Do **not** attach any extra sheets.
- The total number of points is 100. There are 20 multiple choice questions worth 3 points each, and some written questions (we don't know how many yet) worth a total of 40 points. We're hoping to keep the written questions shorter than usual, so it might be wise to try them first.
- For multiple answer questions, fill in the bubbles for **ALL correct choices**: there may be more than one correct choice, but there is always at least one correct choice. **NO partial credit** on multiple answer questions: the set of all correct answers must be checked.
- For written questions, **please write your full answer in the space provided** and **clearly label all subparts of each written question**. Again, do not attach extra sheets.

First name	
Last name	
SID	

# Q1 Multiple Answer

Fill in the bubbles for **ALL correct choices**: there may be more than one correct choice, but there is always at least one correct choice. **NO partial credit**: the set of all correct answers must be checked.

(a) A.

B.

(b) A.

B.

(c) A.

B.

(d) A.

B.

(e) A.

B.

(f) A.

B.

(g) A.

B.

(h) A.

B.

(i) A.

B.

(j) A.

B.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

(k) A.

B.

(l) A.

B.

(m) A.

B.

(n) A.

B.

(o) A.

B.

(p) A.

B.

(q) A.

B.

(r) A.

B.

(s) A.

B.

(t) A.

B.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

C.

D.

## Q2. Written Question #2

### Q3. Written Question #3

## Q4. Written Question #4

## Q5. Written Question #5