Yale University
Department of Statistics and Data Science
Quiz 3

STATISTICS 365/565

Issued: 04/12/2021 **Due:** 04/16/2021

Notes: You will have one hour to solve this problem. You cannot discuss this quiz with anybody at any time before the due date. You *can* use notes, online resource, videos, etc... Just nothing adaptive on which you can ask a direct question and get it answered (e.g. no stackoverflow/slack/asking a friend/etc...).

Submission: You will submit this to gradescope as a PDF. Note that there is a time limit, so once you start reading this file your time starts.

PCA representations Suppose we have training data $x_i \in \mathbb{R}^d$. How would you use PCA to visualize this data in two dimensions? How would you use PCA to find a low-rank representation of the data?