Assessments (Individual work only): • Quiz 1: 5% of the grade • Quiz 2: 5% of the grade • Assignment: 20% of the grade • In-class Test: 25% of the grade • Final Exam: 45% of the grade

obtuse angle

acute angle

out product

矩阵的秩 Rank of Matrix

inner product outer product

矩阵对角化

eigenvectors are orthogonal 特征向量正交

R 是对角化矩阵 增强

trace 对角线的和 矩阵的迹

https://kozodoi.me/blog/20230326/pca-from-scratch

Lecture 4

Span：向量线性组合

dimension：rank (秩)

Lecture 5

Matrix Derivative 对应每个求导就好

Numerator Layout: output （分子）当行
Numerator layout Denominator layout：分母当行

Backpropagation 反向传播，把所有偏导递推

convex 往下变小最小值 斜率递增

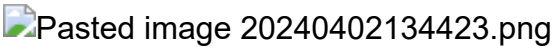
拉格朗日乘数法

f 需要优化的函数，g （输出是个常数就行无所谓）是限制

$$f' - \lambda g' = 0$$

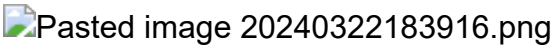
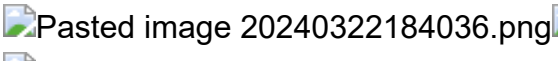
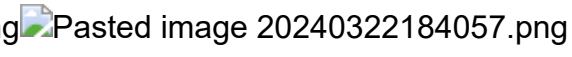
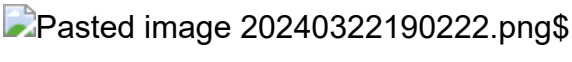
n 元函数，n 个偏导为 0 的等式，加上一个限制，求出 $x, y, \ldots$

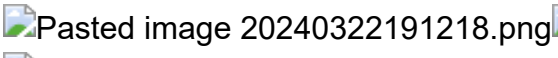
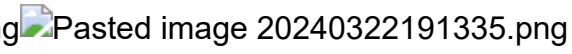
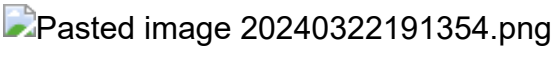
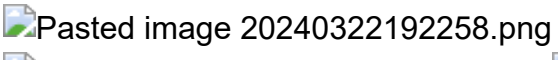
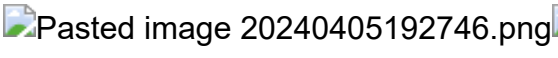
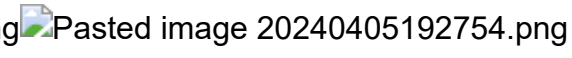
Lecture 6

 Pasted image 20240402134423.png

d (PDF) p (CDF) q (CDF ^ -1) r (随机抽一个)
从 1 开始

Lec 7

 Pasted image 20240322183916.png
GEOM_FUNCTION：画什么图
mapping: x = ?, y = ?
position:放在哪（dodge 放一边
COORDINATE:
FACET-- 分成其他的图
 Pasted image 20240322184036.png  Pasted image 20240322184057.png
 Pasted image 20240322190222.png$. 每列的东西
names() <- ...

 Pasted image 20240322191218.png  Pasted image 20240322191335.png
 Pasted image 20240322191354.png
intersect
 Pasted image 20240322192258.png
 Pasted image 20240405192746.png  Pasted image 20240405192754.png

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