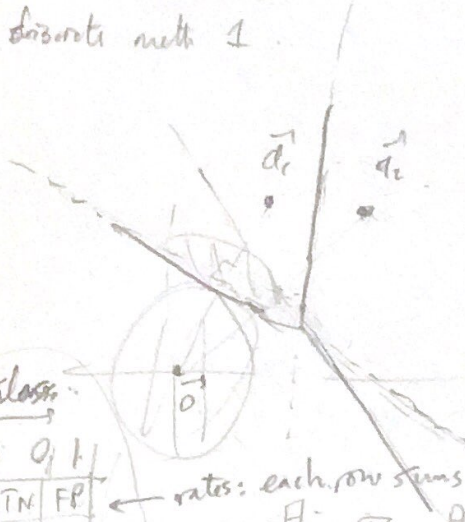
Tanya Wang

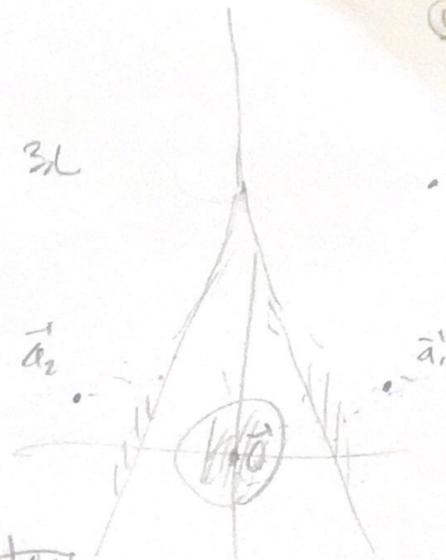
① 6/23/21

discrete math 1

• viz in 3d

• bounds for FP?





class →

true ↓	0	1
0	TN	FP
1	FN	TP

← rates: each row sums to 1. $\begin{bmatrix}1&0\\0&1\end{bmatrix}$ perfect

U.B. on FP rate = $N_{configs}$ · erf(worst)

L.B. = erf(worst). ?

	∅	t=0, r=0	t=0, r=π/2	t=0, r=π	...	t=1, r=...	→ detected j
∅	$1-p_0$						
t=0, r=0		$\frac{p_0}{N_c}$					
			$\frac{p_0}{N_c}$				
				$\frac{p_0}{N_c}$			

true i ↓

↳ confusion matrix.

Another normalization: each row sum = # times (frac) true thing happened.

perfect $\begin{bmatrix}\#p_0&0\\0&\#p_0\end{bmatrix}$

perfect = diagonal.

imagesc.

↳ very roughly. $e^{-\frac{\|\vec{a}_i-\vec{a}_j\|^2}{2\sigma^2}}$ (compare matrices?) as in "Diffusion maps".

Modular code: func to make mol (p,n).

[truth, y] = func to gen. template (args: N, mol)

d = funcs to detect (y)

func to plot the raw data ↓ N=2 plot, N=3 plots

C = func to fill confusion matrix (truth, d)

imagesc(C).

$\begin{bmatrix}y\\truth\end{bmatrix}$ = gen data (N, mol, σ).

y = gen temp + σ · randn.

loop over σ.

y:

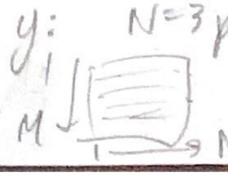
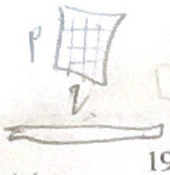


image.

ROC curve idea.

$d1$ histograms : $\min_{j=0,\dots,N_c} \| \vec{y} - \vec{a}_j \|_2^2$ $\vec{a}_0 = \vec{0}$ ← noise.

$d2 := \hat{a}^T \hat{y}$.



World Newsreel, New York City; V Tape, Toronto, Canada. 28 minutes. (Co-producer Jul

1993 Pr
co
H

1992

1991

1991

199

19

1

"Riots", a piece for a video art installation
by "Busting The

$N \leq 3 \max(p,q)$

$\# t \approx 2 \max(p,q)$

Build C for diff. detection methods.

↳ Funcs. ("diffs")

& 6's.

& aspect ratios

p/q

Make C func. for t's only.