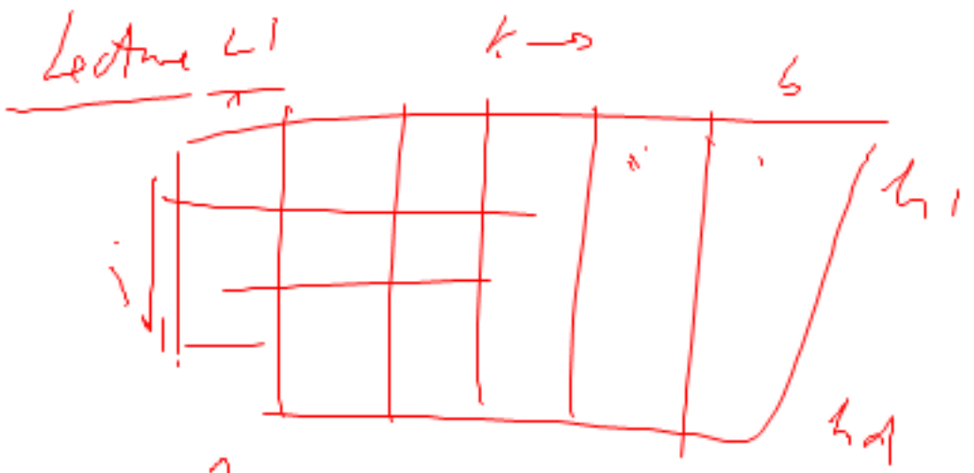
Lecture 11



N - th bit →

$\frac{N}{b}$ bits in a bucket

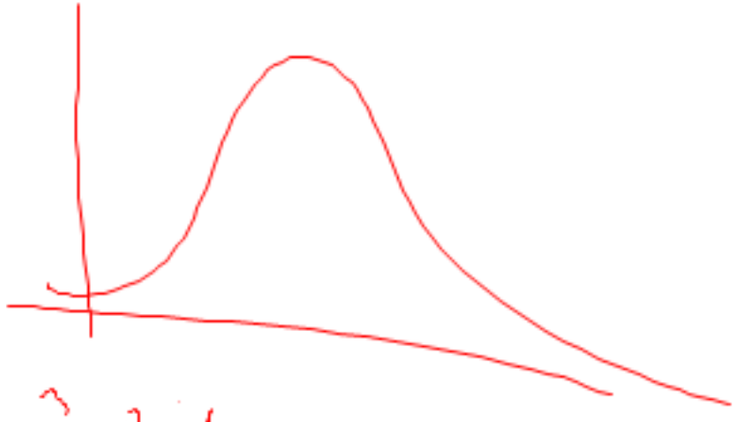
$\vec{q}_1$ - min - h_1

$A_j[h_1(i)] > q_1$

h_1

$\vec{q}_1 = q_1 + \varepsilon \|q_1\|$

$q_1 = \vec{q}_1 - \varepsilon \|q_1\|$



2 points out of N and A_i is

$\min_{i=1}^{n} X_i$ $\quad X_i \sim N(0,1)$

$P\{\min_i X_i > x\} = P(\forall_i X_i > x)$

$= P(X_1 > x)^n$

X_i's are iid

$(1-F(\cdot))^n$

cdf of $\min(\cdot)$

$F(\cdot)$ of

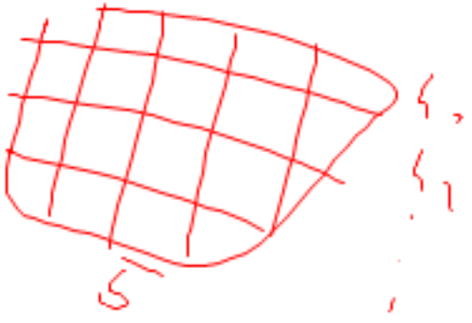
$\langle \vec{\zeta}, \vec{\zeta} \rangle = \min_{\text{all } ij} \sum_{k=1}^{5} A_{ik} B_{jk}$

$= \sum_i \zeta_i \zeta_i + \varepsilon \|\vec{\zeta}\|_1 \|\vec{\zeta}\|_1$

Inner product

$\vec{a}, \vec{b}$ vectors

$\langle \vec{a}, \vec{b} \rangle = \sum_i a_i b_i$



Fix $j \rightarrow$ fix ζ_1

$\langle \vec{\zeta}, \vec{\zeta} \rangle = \sum_i a_i \zeta_i \rightarrow \sum_{k=1}^{5} A_{jk} B_{jk}$

Geradenscharen

- 1. Spezialfall: