What is it?

An iterative algorithm that finds local maximum likelihood estimates.







- Olmage Processins Data Mining
- Bayesian Statistics
- Machine Learning
- Statistical Genetics



Why do we care?

EM algorithm is most helpful when we have a variable dependent on our parameters that we can't directly observe or measure. This is called Latent variable

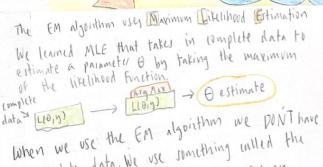






Mo sells ice cream in the park everyday. He keeps a log of the ice creams be pulls

Mos runeam log: X, X2 ... Xn where Xi = number of idellums sold that





DE

Mo does this illegaly, and some days he is kicked out of the park by the police, which can be represented by

the random variable 2

the complete data. We use something called the Q Function instead. The Q function used an estimate of and the data estimate the complete data, then using this estimate of the complete data we can maximize the Q function to get a new



Mo wants to estimate how much M money he would make per day without getting kicked out, but he locant know which days he got kicked out. We enit estimate of just using X because our latent variable 2 impacts our hata in an unknown way. Unkers Mo Upu the EM Algorithm

estimate for 0 -> MW O. Q function observed a Fraction estimate of language we can do this iteratively until our & converses

- NW DZ

Genetian estimate of function against

Now the FIND OUT EM algorithm (AN

even bitternate