Revision Lecture

# Post Mid-Term

Linearity of Expectation:

E[X+Y] = E[X] + E[Y]

Linearity of Variance when RVs are independent:

Var(X+Y) = Var(X) + Var(Y)

Scaling of Variance

Var(aX) = a2Var(X)

Chebyshev - don’t need to learn, but need to know how to use

Confidence Intervals - Inequality of Chebyshev / CLT / Bootstrapping - resampling

Logistic regression - classification -1, 1

Linear regression - real values

1) Input \_ x

y = h0(x) prediction given x

2) cost function J(o)

3) Choose o to minimise \_ i.e. steepest slope

likelihood