

EXAM TOPICS

L1-2 BAYESIAN: PRIORS AND POSTERIORS

BAYES RULE

- CALCULATE PDF/PMF
- SPECIAL: Normal PRIOR \rightarrow Normal POSTERIOR
Beta PRIOR \rightarrow Beta POSTERIORS
- ESTIMATION: CE, MAP
- HYPOTHESIS TESTING
- ERROR PROBABILITY

L3 SAMPLE STATISTICS ARE RANDOM VARIABLES

- SAMPLE MEAN
- HOW TO CALCULATE PMF/PDF
- COMPARE SAMPLE V.S. ACTUAL
- PROPERTIES OF SAMPLE MEAN
- SAMPLE VARIANCE & ADJUSTED SAMPLE VARIANCE

CONVOLUTION

WEAK LAW C.L.T.

L4 POINT ESTIMATION

- UNBIASED ESTIMATORS
- CONSISTENT ESTIMATORS
- MINIMUM VARIANCE PRINCIPLE
- MAXIMUM LIKELIHOOD ESTIMATORS

WEAK LAW

L5-6 CONFIDENCE

- CONFIDENCE INTERVAL
- LEVEL OF CONFIDENCE
- COMMON CASES
 - Normal(μ, σ)
 - Indicator(p)
- TWO-SIDED VS. ONE-SIDED
- PREDICTION INTERVALS

NORMAL R.V.
ALGEBRA