ASTR 324: Introduction to AstroStatistics and Big Data in Astronomy

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MY NAME IS (print please!): —————————————————————————————

Final Exam

Each answer is worth 10 points (for 110 total).

1) Define probability distribution function (pdf) and describe the difference between population pdf and empirical pdf.

2) State Bayes' Rule.

3) When is better to use the median than the mean as an estimator of location parameter?

4) Explain the difference between accuracy and precision

5) What are the key differences between the Frequentist and Bayesian Inference paradigms?

6) How would you measure the goodness of fit?

7) Explain briefly the role of priors in Bayesian Inference. You can use equations.

8) Explain the basics of Markov Chain Monte Carlo.

9) Explain the basics of the Principal Component Analysis.

10) Define Periodograms and describe their basic properties.

11) What are the diffrences between Unsupervised and Supervised Classification?