PES UNIVERSITY, Bangalore

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Department of Computer Science & Engineering

Statistics for Data Science

Assignment – Large Sample Tests for a Population Proportion

Many investors and financial analysts believe the Dow Jones Industrial Average (DJIA) provides a good barometer of the overall stock market. On January 31, 2006, 9 of the 30 stocks making up the DJIA increased in price. On the basis of this fact, a financial analyst claims we can assume that 30% of the stocks traded on the New York Stock Exchange (NYSE) went up the same day.

a. Formulate null and alternative hypotheses to test the analyst's claim.

b. A sample of 50 stocks traded on the NYSE that day showed that 24 went up. What is your point estimate of the population proportion of stocks that went up?

c. Conduct your hypothesis test using α =.01 as the level of significance. What is your conclusion?