ECEN321 - Lab 4
Hypothesis Testing

Joshua Benfell - 300433229

June 5, 2020

1 Introduction

In this report a hypothesis test will be performed and analysed. The null hypothesis is that realisations of a poisson generated random variable is actually from a poisson distribution. This will be tested using a χ^2 test. Consequently the alternate hypothesis is that the poisson random variable is not from a poisson distribution.

2 Method

To test this hypothesis, $M = 100$ inter-arrivals will be generated from a Poisson random variable. This will be done by transforming a uniform random variable into a poisson random variable. To do this we take the negtaive log of the uniform random variable and divide it by the poisson parameter $\lambda = 3$. From here, the cumulative sum is taken of the inter arrival times to find the times at which an arrival happens.

3 Results

4 Conclusion

Appendices