zaBrenden Hein

CSE 802

Dr. Ross

**Homework 3**

= =

* 1. A plot of 10000 bivariate random patterns…

Chart, scatter chart

Description automatically generated

Fig. 1. 10,000 randomly generated bivariate points given a mean and covariance.

* 1. A plot of 10000 whitened bivariate random patterns

Chart, scatter chart

Description automatically generated

Fig. 2. 10,000 randomly generated whitened bivariate points given a mean and covariance.

* 1. In pattern 2c, the variables are positively correlated. This can be seen by the plots upwards tilt. However, in 2d, after applying the whitening transformation, the variables have become decorrelated (as there is no slant to the plot) . However, in both 2c and 2d, the variance for x1 is larger than the variance for x2.