

## MTH 441A: Lab 7

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**P 1.** Consider the Webster, Gunst, and Mason (WGM) data set given in Table 9.4 of Montgomery Book.

- (a) Normalise the data set by subtracting the associated mean and dividing by the square root of  $(n - 1) \times$  the sample variance of each variables.
- (b) Find the VIFs.
- (c) Find the condition number.
- (d) Find the eigen vectors and verify if it matches with the eigen vectors given in Table 9.6 of Montgomery Book.

**P 2 .** Find variance Decomposition Proportions for the WGM data and verify if it matches with the results reported in Table 9.7 of Montgomery Book.