

- 1 **Write out the following models of elementary/intermediate statistical analysis in the matrix form:**

$$Y = X\beta + \epsilon$$

- 2 **Use `eigen()` function in R to compute the eigenvalues and eigenvectors of**  
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- 3 **Consider the matrices**
- 4 **Write an R function to conduct projection, e.g. with the name `{project()}`**
- 5 **Consider the (non-full-rank) two-way “effect model” with interactions in the Example (d) in lecture.**