

Exer 9.9

[Computation/vectors/vectors105a]

Here is a small dataset with 5 cases:

wage	educ	sex	married	age	sector
12.00	12	M	Married	32	manuf
8.00	12	F	Married	33	service
16.26	12	M	Single	32	service
13.65	16	M	Married	33	prof
8.50	17	M	Single	26	clerical

Consider these several vectors:

$$\begin{array}{c}
 \text{A} \\
 \left[\begin{array}{c} 1 \\ 0 \\ 0 \\ 0 \\ 0 \end{array} \right]
 \end{array}
 \quad
 \begin{array}{c}
 \text{B} \\
 \left[\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{array} \right]
 \end{array}
 \quad
 \begin{array}{c}
 \text{C} \\
 \left[\begin{array}{c} 0 \\ 1 \\ 0 \\ 0 \\ 0 \end{array} \right]
 \end{array}
 \quad
 \begin{array}{c}
 \text{D} \\
 \left[\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 1 \end{array} \right]
 \end{array}
 \quad
 \begin{array}{c}
 \text{E} \\
 \left[\begin{array}{c} 0 \\ 0 \\ 0 \\ 1 \\ 0 \end{array} \right]
 \end{array}$$

Using the indicator vectors for sector and sex in the small dataset, say which of the vectors corresponds to each interaction term:

1. **sectorservice:sexF**

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2. **sectorclerical:sexM**

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3. **sectorprof:sexF**

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4. **sectorservice:sexM**

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5. **sectormanuf:sexM**

A B C D E Exer 9.9-5