

## MAR 45% missing: For comparison

```
# sample MCAR dataset from PUMS
source("../utils/sampleMAR45.R")
n = 10000
missing_col = c(1,3,7,9,10,11)
set.seed(3)

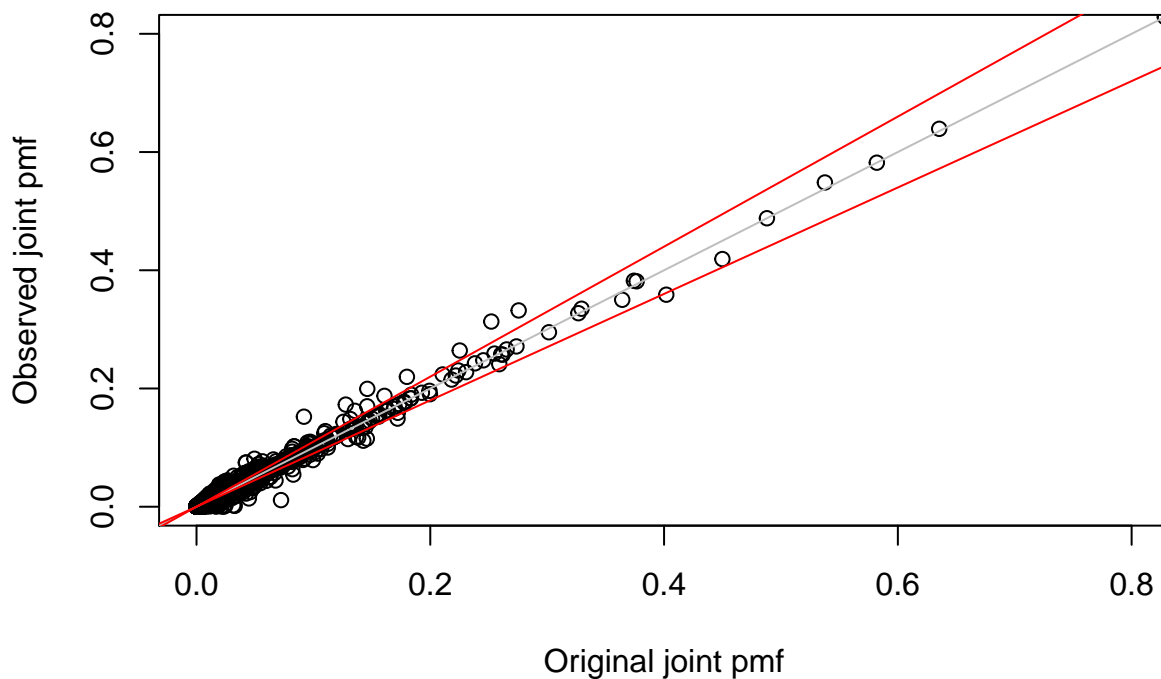
output_list <- sampleMAR45(n)
df <- output_list[['df']]
df_observed <- output_list[['df_observed']]

apply(is.na(df_observed), MARGIN = 2, mean)
```

```
##      VEH      MV      NP      RMSP      ENG      MARHT      SCHL      RACNUM      AGE      WKL      PINCP
## 0.4456 0.0000 0.3998 0.0000 0.0000 0.0000 0.4842 0.0000 0.4670 0.4478 0.4384
```

Assess bivariate joint distribution

### Bivariate pmf



Assess trivariate joint distribution

### Trivariate pmf

