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EXAMPLE RSIENA CODE (R)

FIRST YEAR CALL NETWORK

To see the code in action, please visit my **Phones and Friends project** from the homepage or my website listed above.

```r
#...

#Call the RSiena library
library(RSiena)

#Create an array of the different time periods
FYCall <- sienaDependent(
    array( c( FYcallt1, FYcallt2, FYcallt3, FYcallt4, FYcallt5,
    FYcallt6, FYcallt7, FYcallt8, FYcallt9, FYcallt10, FYcallt11, FYcallt12,
    FYcallt13,FYcallt14, FYcallt15, FYcallt16, FYcallt17, FYcallt18, FYcallt19, FYcallt20),
        dim = c(34, 34, 20)
        ))

#Include the effects of interest for the model
Singapore <- coCovar(Demo [,14])
Cohort <- coCovar(Demo [,1])
ProfE <- coCovar(Demo[,17])
ProfM <- coCovar(Demo[,18])
CSbeh <- varCovar (codeswitch)
#Defines CSbeh as a behavior variable
#allowing for the model t ohave an effect on the variable as well.

#Create the siena algorithm
mydata <- sienaDataCreate (FYCall, Singapore, Cohort, ProfE, ProfM, CSbeh)

#Print the algorithm
mydata

#Include the effects of interest for the model; see project for example
#outcomes and interpretation
myeff <- getEffects(mydata)
myeff <- includeEffects (myeff, egoX, altX, sameX, interaction1 = "Singapore")
myeff<- includeEffects(myeff, sameX, interaction1 = "Cohort")
myeff <- includeEffects(myeff, egoX, altX, simX, interaction1 = "ProfE")
myeff <- includeEffects(myeff, egoX, altX, simX, interaction1 = "ProfM")
myeff <- includeEffects (myeff, egoX, altX, simX, interaction1 = "CSbeh")
```

```
#These variables below were included in a stepwise fashion in order to find the best model.
#They were ultimately not included in the final model, as they decreased the -2loglikelihood
#and/or were not significant.

#myeff <- includeEffects (myeff, name = "CSbeh", avSim, interaction1 = "FYCall")
#myeff <- includeEffects (myeff, name = "CSbeh", avSimEgoX,
        interaction1 = "ProfE", interaction2 = "FYCall")
#myeff <- includeEffects (myeff, name = "CSbeh", avSimEgoX,
        interaction1 = "ProfM", interaction2 = "FYCall")
#myeff <- includeEffects (myeff, name = "CSbeh", effFrom, interaction1 = "ProfE")
#myeff <- includeEffects (myeff, name = "CSbeh", effFrom,  interaction1 = "ProfM")

myeff


#Run the algorithm
myeffAlgorithm <- sienaAlgorithmCreate (projname = 'FYCall', cond =FALSE)
FYCall_lang  <- siena07(myeffAlgorithm, data = mydata, effects = myeff)
FYCall_lang

#print tables of the results, including p-values for the Betas.
siena.table(FYCall_lang , type="html", sig=TRUE)
siena.table(FYCall_lang, type="txt", sig=TRUE)
```