CSP4141\_IntroToUnmarkedWorkflow

MLR

March 20, 2018

Day 1: unmarked Workflow Example Load unmarked

## Warning: package 'unmarked' was built under R version 3.4.4

## Loading required package: reshape

## Warning: package 'reshape' was built under R version 3.4.4

## Loading required package: lattice

## Loading required package: parallel

## Loading required package: Rcpp

## Warning: package 'Rcpp' was built under R version 3.4.4

Part 1. Import data and create unmarkedFrame

OccuData <- read.csv("myOccuData.csv") #read in occupancy data  
siteCovariates <-read.csv("mySiteCovariates.csv") #read in site covariate data  
OccuUMF <-unmarkedFrameOccu(y=OccuData, siteCovs=siteCovariates) #create unmarkedFrame

Part 2. Fit models (remember: formula then data)

model1<-occu( ~1~1, data=OccuUMF) #niave model  
model2 <-occu( ~vegHt ~vegHt, data=OccuUMF) #model with covariate influences on detection and occupancy probabilities

Part 3. Model selection, model fit, etc.

fmList <- fitList(naive=model1, covariate=model2) #Organize models for model selection  
coef(fmList)

## psi(Int) p(Int) psi(vegHt) p(vegHt)  
## naive 0.7539456 0.8053711 NA NA  
## covariate -3.0109158 2.0294857 2.012676 -0.5793189

SE(fmList)

## psi(Int) p(Int) psi(vegHt) p(vegHt)  
## naive 0.2267962 0.1698222 NA NA  
## covariate 1.1106372 0.7610433 0.6243684 0.3456307

modSel(fmList) #model selection

## nPars AIC delta AICwt cumltvWt  
## covariate 4 353.42 0.00 0.9985 1.00  
## naive 2 366.37 12.95 0.0015 1.00

#parboot(fm2)  
#fitted(fm2, na.rm = FALSE)