Shaded Confidence Intervals

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First let's generate two data sets with overlapping confidence intervals.

```r
x <- rnorm(30,mean=10)
y1 <- 0+2*x+rnorm(length(x))
y2 <- 0.5+2*x+rnorm(length(x))

lm1 <- lm(y1~x)
lm2 <- lm(y2~x)

n.pred <- 100
x.pred <- seq(min(x),max(x),length=n.pred)
y1.pred <- predict(lm1,interval="confidence",newdata=list("x"=x.pred))
y2.pred <- predict(lm2,interval="confidence",newdata=list("x"=x.pred))
```

Now let's plot the data, fitted lines, and then translucent confidence intervals with `rgb()` with an `alpha` less than zero. Where the CI overlap, the shaded area is automatically a combination of the other two translucent colors

```r
col1.opaque <- rgb(1,0,0,alpha=1) # solid red
col2.opaque <- rgb(0,0,1,alpha=1) # solid blue

trans.alpha <- 0.25

col1.trans <- rgb(1,0,0,alpha=trans.alpha) # translucent red
col2.trans <- rgb(0,0,1,alpha=trans.alpha) # translucent blue


# Plot observations
plot(x,y1,pch=16,col=col1.opaque,ylim=range(c(y1,y2,y1.pred,y2.pred)))
points(x,y2,pch=16,col=col2.opaque)

# Plot fitted lines
points(x.pred,y1.pred[,"fit"],type="l",col=col1.opaque)
points(x.pred,y2.pred[,"fit"],type="l",col=col2.opaque)

# Confidence intervals
polygon(c(x.pred,rev(x.pred)), c(y1.pred[,"lwr"],rev(y1.pred[,"upr"])),col=col1.trans,border=NA)
polygon(c(x.pred,rev(x.pred)), c(y2.pred[,"lwr"],rev(y2.pred[,"upr"])),col=col2.trans,border=NA)
```
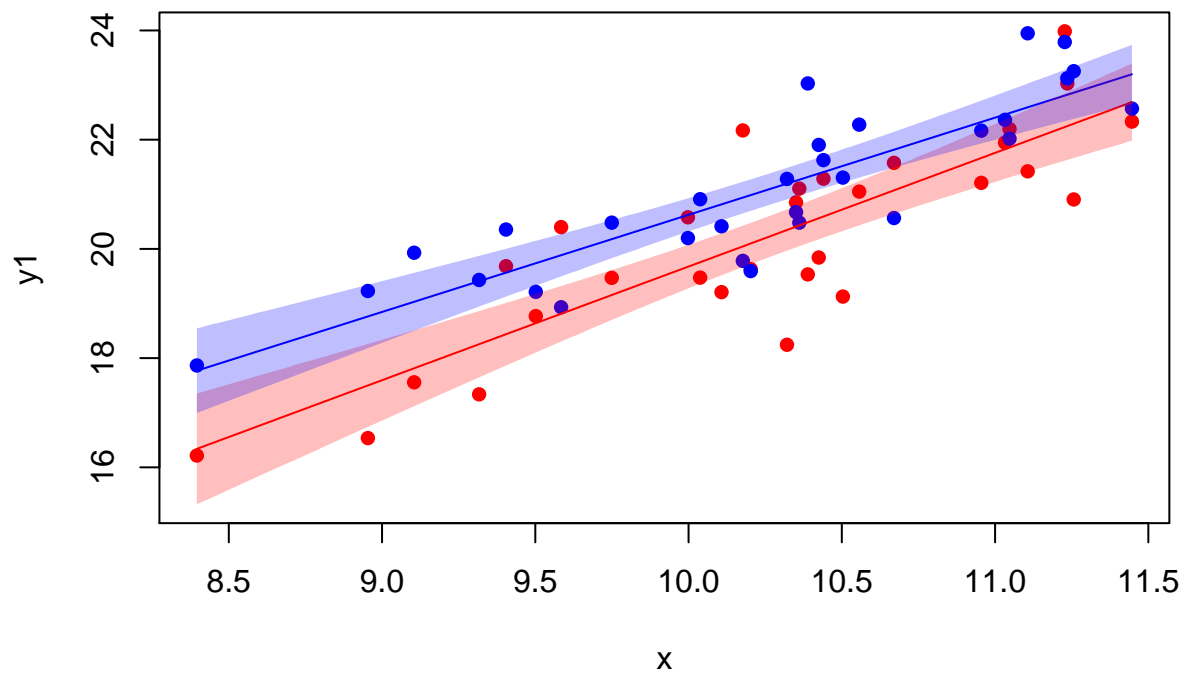
NOTE the `rev()` function above is used to reverse the order of the x and y values for the second confidence band, so that the confidence polygon plots as a closed shape.