Depth estimation from Monodepth2 result

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Load essential libraries

```
# Explanatory analysis of MONOdepth result
library(pacman)
p_load(dplyr, ggplot2, ggpmisc)
```

Read and organize the data

```
# Read data
setwd("/home/kwanghun/Dropbox/Project/TreeInventory/Data/DepthEstimation/")
D_result <- read.csv("MonoDepth2VSDistance.csv")
colnames(D_result) <- c("ID", "Number", "Distance", "Disparity", "InvDisparity")
D_result$ID <- as.factor(D_result$ID)
```

Create plot for the data

```
summary(lm(Distance~InvDisparity, data=D_result))
```

```
##
## Call:
## lm(formula = Distance ~ InvDisparity, data = D_result)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -12.319  -5.010  -1.446   4.060  24.651
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    8.2224     1.5001   5.481 1.98e-07 ***
## InvDisparity   0.1994     0.0245   8.141 2.23e-13 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 7.094 on 136 degrees of freedom
## Multiple R-squared:  0.3276, Adjusted R-squared:  0.3227
## F-statistic: 66.27 on 1 and 136 DF,  p-value: 2.226e-13
```

```
D_plot <-
    ggplot(data = D_result, aes(x = InvDisparity, y = Distance, col=ID)) +
    geom_point() +
    stat_smooth(method="lm", aes( group = 1 )) +
```

```
    geom_text(x = 25,  y = 45, label = "y = 0.20 * x + 8.22", color="black") +
    geom_text(x = 25, y = 40, label = "R^2 = 0.32", color="black") +
    theme(legend.position = "none",text = element_text(size=20) )
```

Result

```
## `geom_smooth()` using formula 'y ~ x'
```