

Results

Get Data

```
path <- 'C:/Users/x249w/Documents/School/Winter 2018/STAT 946/Project/results.csv'
results <- read.csv(path, stringsAsFactors = F)
names(results)[1] <- 'Model'
```

```
psnr <- results %>%
  rowwise() %>%
  mutate_at(.vars = grep('Metrics', names(results), value = T),
    .funs = function(x) {
      as.numeric(strsplit(x, '/')[[1]][1])
    }) %>%
  data.frame()

names(psnr) <- gsub('Metrics', 'PSNR', names(psnr))

psnr <- Map(function(x) {

  dataset <- strsplit(x, '_')[[1]][2]
  scale <- strsplit(x, '_')[[1]][3]

  df1 <- subset(psnr, select = c('Model', 'Epoch', x))
  names(df1)[3] <- 'PSNR'

  df2 <- data.frame(dataset = dataset, scale = scale, stringsAsFactors = F)

  cbind(df1, df2)

}, grep('PSNR', names(psnr), value = T)) %>%
  do.call('rbind', .)

rownames(psnr) <- NULL
```

```
ssim <- results %>%
  rowwise() %>%
  mutate_at(.vars = grep('Metrics', names(results), value = T),
    .funs = function(x) {
      as.numeric(strsplit(x, '/')[[1]][2])
    }) %>%
  data.frame()

names(ssim) <- gsub('Metrics', 'SSIM', names(ssim))

ssim <- Map(function(x) {

  dataset <- strsplit(x, '_')[[1]][2]
  scale <- strsplit(x, '_')[[1]][3]

  df1 <- subset(ssim, select = c('Model', 'Epoch', x))
  names(df1)[3] <- 'SSIM'
```

```

df2 <- data.frame(dataset = dataset, scale = scale, stringsAsFactors = F)

cbind(df1, df2)

}, grep('SSIM', names(ssim), value = T)) %>%
  do.call('rbind', .)

rownames(ssim) <- NULL

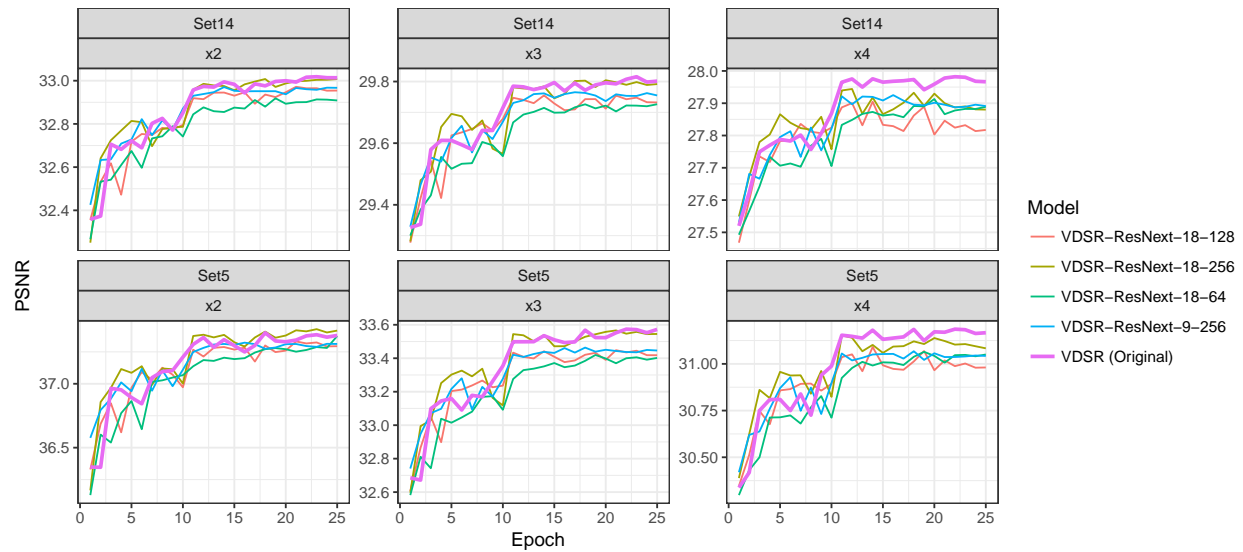
```

PNSR Visualization

```

ggplot(data = psnr) +
  geom_line(data = subset(psnr, subset = !(Model %in% c('Bicubic', 'SRCNN'))),
    aes(Epoch, PSNR, group = Model, color = Model, size = Model)) +
  # geom_hline(data = subset(psnr, subset = Model == 'SRCNN'),
  #   aes(yintercept = PSNR), linetype = 2) +
  scale_size_manual(values = c(0.5, 0.5, 0.5, 0.5, 1)) +
  facet_wrap(dataset ~ scale, scales = 'free_y') +
  theme_bw()

```



SSIM Visualization

```

ggplot(data = ssim) +
  geom_line(data = subset(ssim, subset = !(Model %in% c('Bicubic', 'SRCNN'))),
    aes(Epoch, SSIM, group = Model, color = Model, size = Model)) +
  # geom_hline(data = subset(ssim, subset = Model == 'SRCNN'),
  #   aes(yintercept = SSIM), linetype = 2) +
  scale_size_manual(values = c(0.5, 0.5, 0.5, 0.5, 1)) +
  facet_wrap(dataset ~ scale, scales = 'free_y') +
  theme_bw()

```

