

VDSR-ResNeXt Results

Data prep

```
path <- 'C:/Users/x249w/Documents/School/Winter 2018/STAT 946/Project/Report_Poster/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

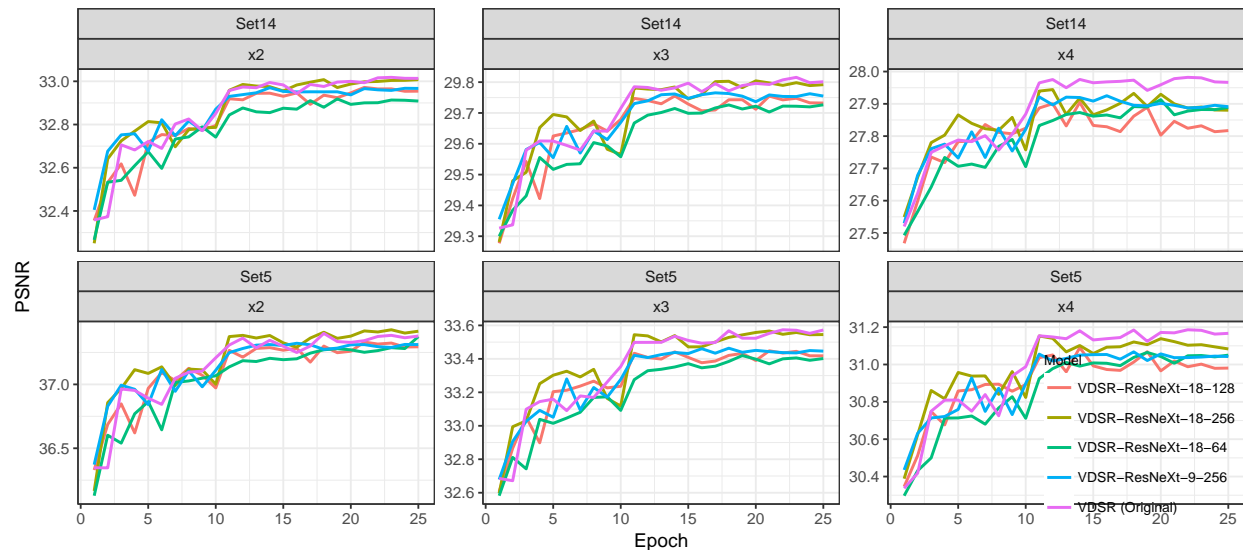
```

Validation Set PSNR Visualization

```

ggplot(data = psnr) +
  geom_line(data = subset(psnr, subset = !(Model %in% c('Bicubic', 'SRCNN'))),
    aes(Epoch, PSNR, group = Model, color = Model), size = 0.8) +
  facet_wrap(dataset ~ scale, scales = 'free_y') +
  scale_y_continuous(breaks = scales::pretty_breaks(n = 5)) +
  theme_bw() +
  theme(legend.position = c(0.91, 0.15),
    legend.background = element_rect(fill = "transparent", colour = NA),
    legend.text = element_text(size = 8),
    legend.title = element_text(size = 8))

```



PSNR Visualization - Report Body Only

Validation Set SSIM Visualization

```

ggplot(data = ssim) +
  geom_line(data = subset(ssim, subset = !(Model %in% c('Bicubic', 'SRCNN'))),
    aes(Epoch, SSIM, group = Model, color = Model), size = 0.8) +
  facet_wrap(dataset ~ scale, scales = 'free_y') +
  scale_y_continuous(breaks = scales::pretty_breaks(n = 5)) +
  theme_bw() +

```

```

theme(legend.position = c(0.91, 0.15),
      legend.background = element_rect(fill = "transparent", colour = NA),
      legend.text = element_text(size = 8),
      legend.title = element_text(size = 8))

```

