Plots for NN

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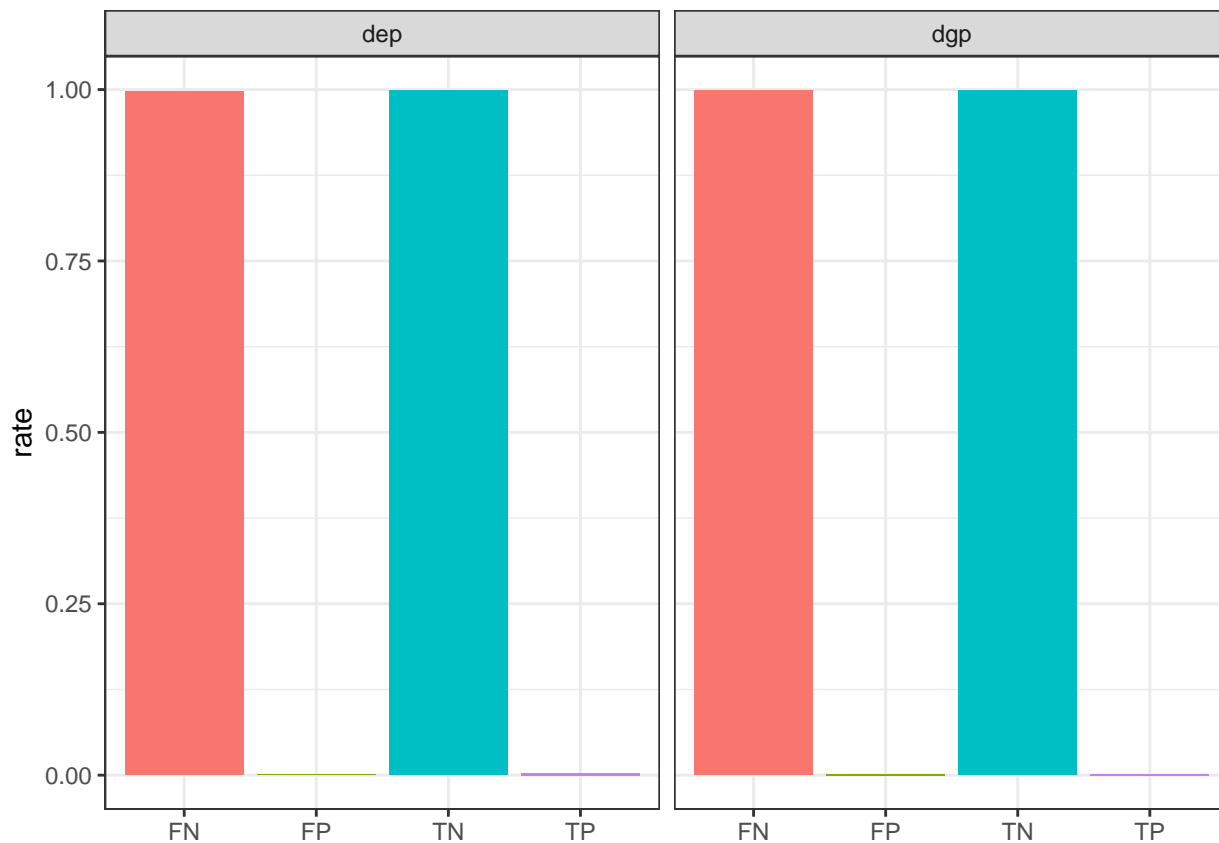
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Confusion matrix

```
confusion_tb_dgp <- tibble(type = c("TP", "FN", "FP", "TN"),
                           rate = c(0.00183066, 0.99816934, 0.00165975, 0.99834025))
confusion_tb_dep <- tibble(type = c("TP", "FN", "FP", "TN"),
                           rate = c(0.00327332, 0.99672668, 0.00125451, 0.99874549))
confusion_tb <-
  bind_rows(confusion_tb_dgp %>% mutate(p = "dgp"),
            confusion_tb_dep %>% mutate(p = "dep"))
confusion_tb
```

```
## # A tibble: 8 x 3
##   type     rate p
##   <chr>   <dbl> <chr>
## 1 TP    0.00183 dgp
## 2 FN    0.998   dgp
## 3 FP    0.00166 dgp
## 4 TN    0.998   dgp
## 5 TP    0.00327 dep
## 6 FN    0.997   dep
## 7 FP    0.00125 dep
## 8 TN    0.999   dep
```

```
confusion_plot <- confusion_tb %>%
  ggplot(aes(x = type, y = rate, fill = type)) +
    geom_bar(stat = "identity") +
  facet_grid(. ~ p) +
  theme_bw() +
  xlab(NULL) +
  theme(legend.position = "none")
confusion_plot
```
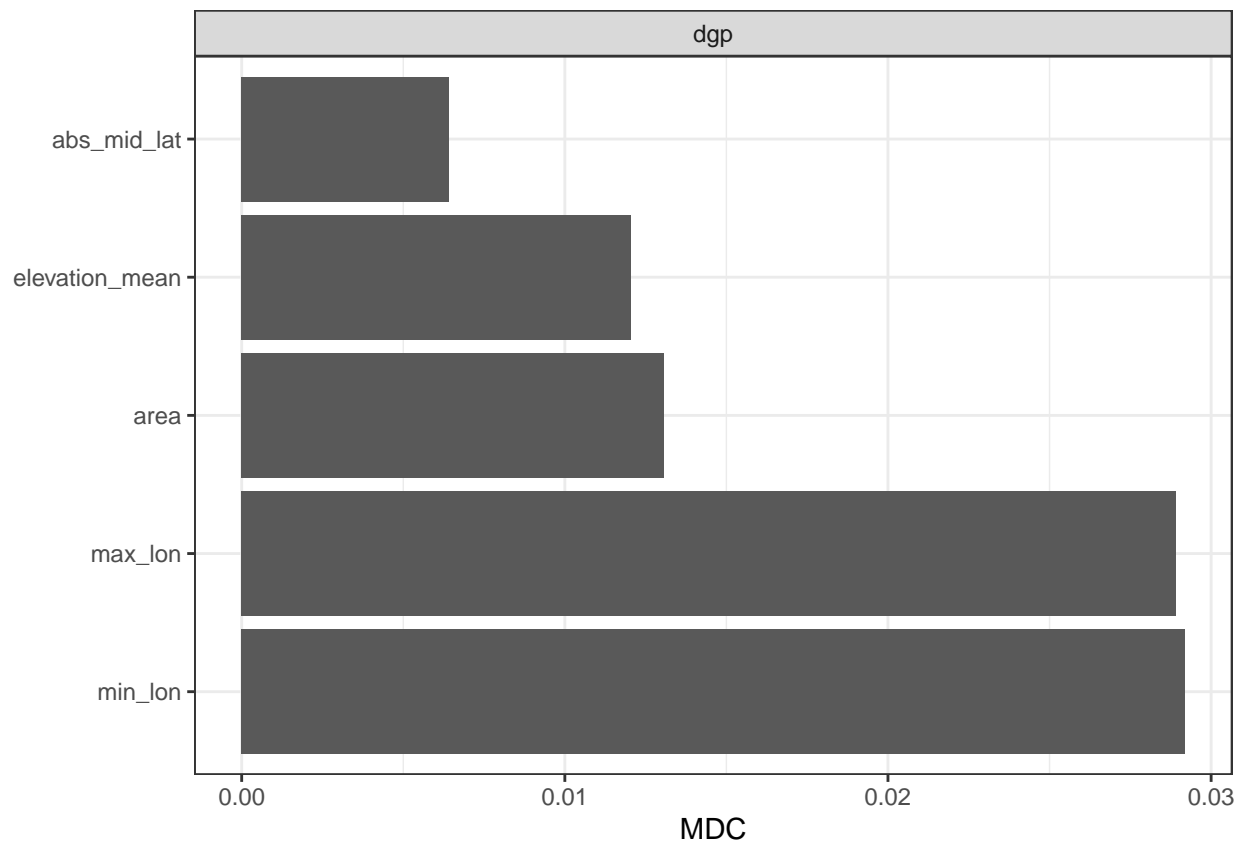
```
ggsave("../report/img/confusion_NN_plot.png",
       plot = confusion_plot,
       width = 4, height = 3, units = "in")
```
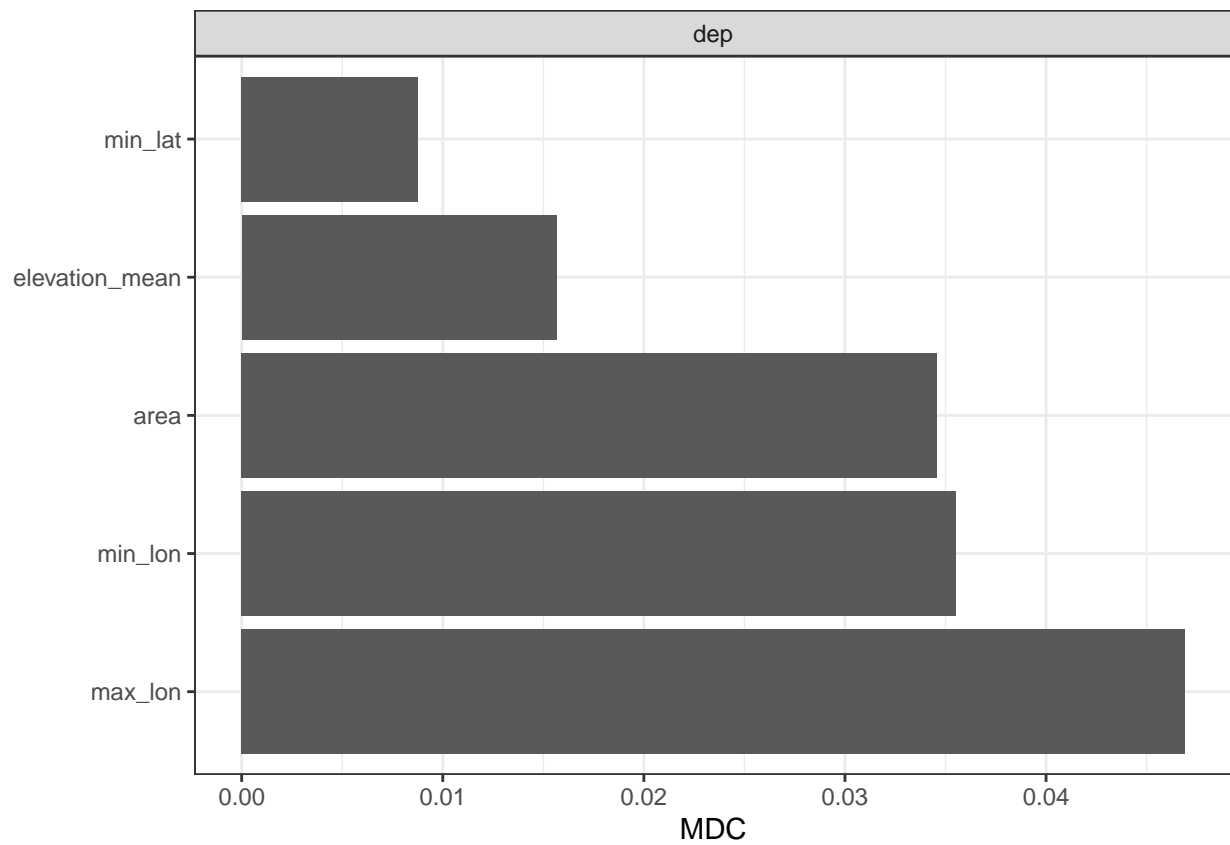
Importance

```
importance_dgp <- tibble(var = c("min_lon", "max_lon", "area", "elevation_mean", "abs_mid_lat") %>% as.
                         MDC = c(0.02918962297472194, 0.028906181329495212, 0.013072665926972649, 0.0120
  mutate(p = "dgp")
importance_dep <- tibble(var = c("max_lon", "min_lon", "area", "elevation_mean", "min_lat") %>% as.facto
                         MDC = c(0.046906361732080126, 0.035510337567239036, 0.034563848770119254, 0.015
  mutate(p = "dep")
importance_NN <- bind_rows(importance_dgp, importance_dep)
```

```
importance_dgp_plot <- importance_dgp %>%
  ggplot(aes(x = reorder(var, -MDC), y = MDC)) +
    geom_bar(stat = "identity") +
  facet_grid(. ~ p) +
  theme_bw() +
  coord_flip()+
  xlab(NULL) +
  theme(legend.position = "none")
importance_dgp_plot
```

```
ggsave("../report/img/importance_dgp_plot.png",
       plot = importance_dgp_plot,
       width = 4, height = 3, units = "in")
```

```
importance_dep_plot <- importance_dep %>%
  ggplot(aes(x = reorder(var, -MDC), y = MDC)) +
    geom_bar(stat = "identity") +
  facet_grid(. ~ p) +
  theme_bw() +
  coord_flip()+
  xlab(NULL) +
  theme(legend.position = "none")
importance_dep_plot
```

```
ggsave("../report/img/importance_dep_plot.png",
       plot = importance_dep_plot,
       width = 4, height = 3, units = "in")
```