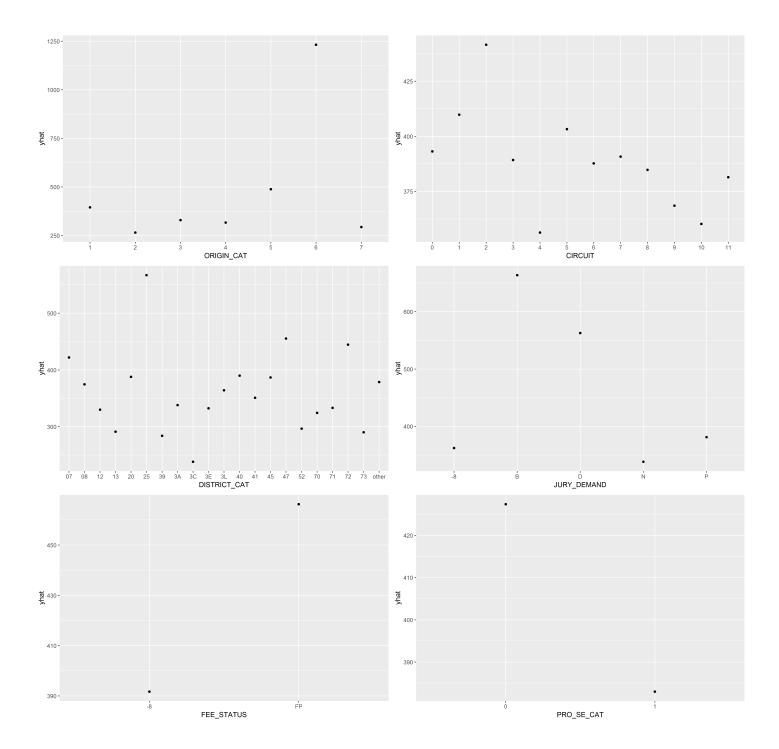
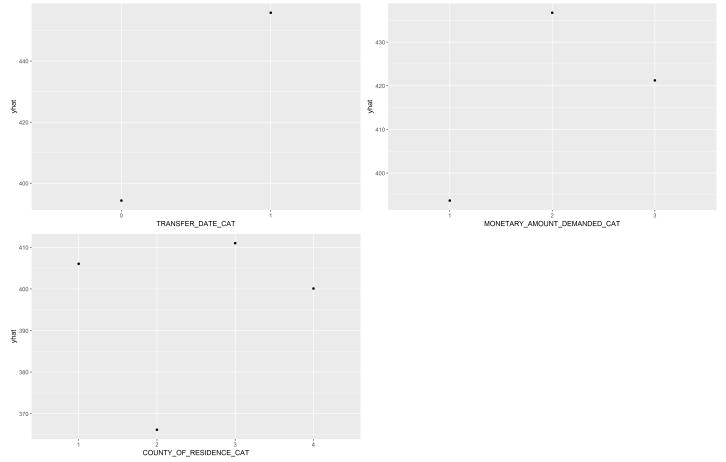
```
# data <- readRDS("data.rds")</pre>
# samp_size <- floor(0.75*nrow(data))</pre>
# set.seed(1000)
# train ind <- sample(seq len(nrow(data)), size = samp size)</pre>
# train <- data[train ind,]</pre>
# test <- data[-train ind,]</pre>
# features <- as.data.frame(data[, !(colnames(data) %in% c("OPEN DAYS"))])</pre>
# response <- as.data.frame(as.numeric(as.vector(data$OPEN DAYS)))</pre>
# predictor.rf <- Predictor$new(model = pruned tree, data = features, y = response)</pre>
#, predict.fun = predfunc)
# p1 <- partial(pruned_tree, pred.var = "ORIGIN_CAT", plot = TRUE, rug = TRUE, plot.engi
ne = "ggplot2")
# p2 <- partial(pruned tree, pred.var = "CIRCUIT", plot = TRUE, rug = TRUE, plot.engine
 = "ggplot2")
# p3 <- partial(pruned tree, pred.var = "DISTRICT CAT", plot = TRUE, rug = TRUE, plot.en
gine = "ggplot2")
# p4 <- partial(pruned tree, pred.var = "JURY DEMAND", plot = TRUE, rug = TRUE, plot.eng
ine = "ggplot2")
# p5 <- partial(pruned_tree, pred.var = "FEE_STATUS", plot = TRUE, rug = TRUE, plot.engi</pre>
ne = "qqplot2")
# p6 <- partial(pruned tree, pred.var = "PRO SE CAT", plot = TRUE, rug = TRUE, plot.engi
ne = "ggplot2")
# p7 <- partial(pruned_tree, pred.var = "TRANSFER_DATE_CAT", plot = TRUE, rug = TRUE, pl
ot.engine = "ggplot2")
# p8 <- partial(pruned tree, pred.var = "MONETARY AMOUNT DEMANDED CAT", plot = TRUE, rug
= TRUE, plot.engine = "ggplot2")
# p9 <- partial(pruned tree, pred.var = "COUNTY OF RESIDENCE CAT", plot = TRUE, rug = TR
UE, plot.engine = "ggplot2")
#
# ggsave(file="pdp_pruned_tree_1.png", p1)
# ggsave(file="pdp pruned tree 2.png", p2)
# ggsave(file="pdp pruned tree 3.png", p3)
# ggsave(file="pdp pruned tree 4.png", p4)
# ggsave(file="pdp pruned tree 5.png", p5)
# ggsave(file="pdp_pruned_tree_6.png", p6)
# ggsave(file="pdp_pruned_tree_7.png", p7)
# ggsave(file="pdp pruned tree 8.png", p8)
# ggsave(file="pdp_pruned_tree_9.png", p9)
# features <- as.data.frame(data[, !(colnames(data) %in% c("OPEN DAYS"))])
# response <- as.data.frame(as.numeric(as.vector(data$OPEN DAYS)))</pre>
# predictor.rf <- Predictor$new(model = pruned_tree, data = features, y = response)</pre>
#, predict.fun = predfunc)
```

```
# rf.org <- Partial$new(predictor.rf, "ORIGIN_CAT") %>% plot() + ggtitle("Pruned Tree")
# temp <- data.frame(rf.org$data$ORIGIN_CAT, rf.org$data$.y.hat)</pre>
\# g <- ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.ORIGIN_CAT)) +
   geom_boxplot() + labs(x = "ORIGIN_CAT", y = 'Open_Days', title="Pruned Tree") +
   theme(plot.title = element text(hjust = 0.5))
# ggsave(file="ice_pruned_tree_boxplot_ORIGIN_CAT.png", g)
# rf.org <- Partial$new(predictor.rf, "COUNTY_OF_RESIDENCE_CAT") %>% plot() + ggtitle("P
runed Tree")
# temp <- data.frame(rf.org$data$COUNTY OF RESIDENCE CAT, rf.org$data$.y.hat)
\# g <- ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.COUNTY_OF_RESIDENCE_CAT))
    geom boxplot() + labs(x = "COUNTY_OF_RESIDENCE_CAT", y = 'Open_Days', title="Pruned
#
Tree") +
   theme(plot.title = element_text(hjust = 0.5))
# ggsave(file="ice pruned_tree_boxplot_COUNTY_OF_RESIDENCE_CAT.png", g)
#
# rf.org <- Partial$new(predictor.rf, "MONETARY_AMOUNT_DEMANDED_CAT") %>% plot() + ggtit
le("Pruned Tree")
# temp <- data.frame(rf.org$data$MONETARY AMOUNT DEMANDED CAT, rf.org$data$.y.hat)
\# g <- ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.MONETARY_AMOUNT_DEMANDED_C
AT)) +
# geom_boxplot() + labs(x = "MONETARY_AMOUNT_DEMANDED_CAT", y = 'Open_Days', title="P
runed Tree") +
   theme(plot.title = element text(hjust = 0.5))
# ggsave(file="ice pruned tree boxplot MONETARY AMOUNT DEMANDED CAT.png", g)
# rf.org <- Partial$new(predictor.rf, "TRANSFER DATE CAT") %>% plot() + ggtitle("Pruned
Tree")
# temp <- data.frame(rf.org$data$TRANSFER DATE CAT, rf.org$data$.y.hat)
# g < - ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.TRANSFER DATE CAT)) +
    geom_boxplot() + labs(x = "TRANSFER_DATE_CAT", y = 'Open_Days', title="Pruned Tre
e")
# theme(plot.title = element text(hjust = 0.5))
# ggsave(file="ice pruned tree boxplot TRANSFER DATE CAT.png", g)
#
# rf.org <- Partial$new(predictor.rf, "PRO_SE_CAT") %>% plot() + ggtitle("Pruned Tree")
# temp <- data.frame(rf.org$data$PRO SE CAT, rf.org$data$.y.hat)</pre>
# g < -ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.PRO SE CAT)) +
   geom\_boxplot() + labs(x = "PRO\_SE\_CAT", y = 'Open\_Days', title="Pruned Tree") +
   theme(plot.title = element text(hjust = 0.5))
# ggsave(file="ice_pruned_tree_boxplot_PRO_SE_CAT.png", g)
#
# rf.org <- Partial$new(predictor.rf, "FEE STATUS") %>% plot() + gqtitle("Pruned Tree")
# temp <- data.frame(rf.org$data$FEE STATUS, rf.org$data$.y.hat)</pre>
\# g <- ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.FEE STATUS)) +
  geom\_boxplot() + labs(x = "FEE_STATUS", y = 'Open_Days', title="Pruned Tree") +
   theme(plot.title = element_text(hjust = 0.5))
# ggsave(file="ice pruned tree boxplot FEE STATUS.png", g)
```

```
#
# rf.org <- Partial$new(predictor.rf, "ORIGIN CAT") %>% plot() + ggtitle("Pruned Tree")
# temp <- data.frame(rf.org$data$ORIGIN_CAT, rf.org$data$.y.hat)</pre>
\# q \leftarrow qqplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.ORIGIN CAT)) +
    geom\ boxplot() + labs(x = "ORIGIN\ CAT", y = 'Open\ Days', title="Pruned\ Tree") +
    theme(plot.title = element_text(hjust = 0.5))
# qqsave(file="ice pruned tree boxplot ORIGIN CAT.png", q)
#
# rf.org <- Partial$new(predictor.rf, "JURY_DEMAND") %>% plot() + ggtitle("Pruned Tree")
# temp <- data.frame(rf.org$data$JURY DEMAND, rf.org$data$.y.hat)</pre>
\# g <- ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.JURY_DEMAND)) +
    geom\ boxplot() + labs(x = "JURY\ DEMAND", y = 'Open\ Days', title="Pruned\ Tree") +
    theme(plot.title = element text(hjust = 0.5))
# qqsave(file="ice pruned tree boxplot JURY DEMAND.png", q)
#
# rf.org <- Partial$new(predictor.rf, "DISTRICT_CAT") %>% plot() + ggtitle("Pruned Tre
e")
# temp <- data.frame(rf.org$data$DISTRICT CAT, rf.org$data$.y.hat)</pre>
# g < - ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.DISTRICT_CAT)) +
    geom\ boxplot() + labs(x = "DISTRICT\ CAT", y = 'Open\ Days', title="Pruned\ Tree") +
    theme(plot.title = element text(hjust = 0.5))
# ggsave(file="ice pruned tree boxplot DISTRICT CAT.png", g)
#
# rf.org <- Partial$new(predictor.rf, "CIRCUIT") %>% plot() + ggtitle("Pruned Tree")
# temp <- data.frame(rf.org$data$CIRCUIT, rf.org$data$.y.hat)</pre>
# g <- ggplot(temp, aes(y=rf.org.data..y.hat, x = rf.org.data.CIRCUIT)) +
    geom\ boxplot() + labs(x = "CIRCUIT", y = 'Open\ Days', title="Pruned\ Tree") +
    theme(plot.title = element text(hjust = 0.5))
# ggsave(file="ice pruned tree boxplot CIRCUIT.png", g)
knitr::include graphics("pdp pruned tree 1.png")
knitr::include graphics("pdp pruned tree 2.png")
knitr::include graphics("pdp pruned tree 3.png")
knitr::include graphics("pdp pruned tree 4.png")
knitr::include graphics("pdp pruned tree 5.png")
knitr::include graphics("pdp pruned tree 6.png")
knitr::include_graphics("pdp_pruned_tree_7.png")
knitr::include graphics("pdp pruned tree 8.png")
knitr::include_graphics("pdp_pruned_tree_9.png")
```





```
knitr::include_graphics("ice_pruned_tree_boxplot_ORIGIN_CAT.png")
knitr::include_graphics("ice_pruned_tree_boxplot_CIRCUIT.png")
knitr::include_graphics("ice_pruned_tree_boxplot_DISTRICT_CAT.png")
knitr::include_graphics("ice_pruned_tree_boxplot_JURY_DEMAND.png")
knitr::include_graphics("ice_pruned_tree_boxplot_FEE_STATUS.png")
knitr::include_graphics("ice_pruned_tree_boxplot_PRO_SE_CAT.png")
knitr::include_graphics("ice_pruned_tree_boxplot_TRANSFER_DATE_CAT.png")
knitr::include_graphics("ice_pruned_tree_boxplot_MONETARY_AMOUNT_DEMANDED_CAT.png")
knitr::include_graphics("ice_pruned_tree_boxplot_COUNTY_OF_RESIDENCE_CAT.png")
```

