Applying vetiver

2022.09.16.

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1 Load libraries and models_list

- vetiver: 모델을 저장, 로드, 배포하기 위한 패키지
- pins: cache를 이용한 자원 관리 패키지. 주로 원격리소스(CSV, JSON, 이미지, R object 등등)를 로컬 캐시에 고정하는 역할
- plumber: R을 사용해 로컬에서 웹서버를 띄우기 위한 패키지

```
library(vetiver)
```

```
Warning: package 'vetiver' was built under R version 4.2.1
```

```
library(pins)
```

```
Warning: package 'pins' was built under R version 4.2.1
```

```
library(plumber)
```

```
Warning: package 'plumber' was built under R version 4.2.1
```

```
library(dplyr)
```

```

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

    filter, lag

The following objects are masked from 'package:base':

    intersect, setdiff, setequal, union
```

```
models_list <- readRDS(file = "../data/sample_models_list.rda")
names(models_list)
```

```
[1] "logisticRegression_glmnet"
```

2 Create a vetiver object for deployment of my model

```
my_model <- "logisticRegression_glmnet"
version <- 0.1
model_name = paste0(my_model,"_", version)

v <- vetiver::vetiver_model(model = models_list[[my_model]]$.workflow[[1]],
                            model_name = model_name)
v
```

```
-- logisticRegression_glmnet_0.1 - <butchered_workflow> model for deployment
A glmnet classification modeling workflow using 8 features
```

3 Save the vetiver object in local folder

```
model_board <- pins::board_folder(path = "../models/")
model_board %>% vetiver::vetiver_pin_write(v)
```

```
Replacing version '20220916T014835Z-53e8d' with '20220916T015645Z-53e8d'
Writing to pin 'logisticRegression_glmnet_0.1'

Create a Model Card for your published model
* Model Cards provide a framework for transparent, responsible reporting
* Use the vetiver `.Rmd` template as a place to start
```

4 Deploy my model

```
plumber::pr() %>%
  vetiver::vetiver_api(v) %>%
  plumber::pr_run(port = 8088)
```

5 predict for new data using deployed model

- 위 포트에 deploy가 되어있으면, endpoint를 지정하고 다른 세션에서 새 데이터를 모델에 넣어보자

```
endpoint <- vetiver_endpoint("http://127.0.0.1:8088/predict")

new_sac <- cleaned_data %>%
    dplyr::slice_sample(n = 50) %>%
    dplyr::select(TG, SEX, AGE_G, HGB)

predict(endpoint, new_sac)
```