

# Infinite Shiny World

# Who Are you?

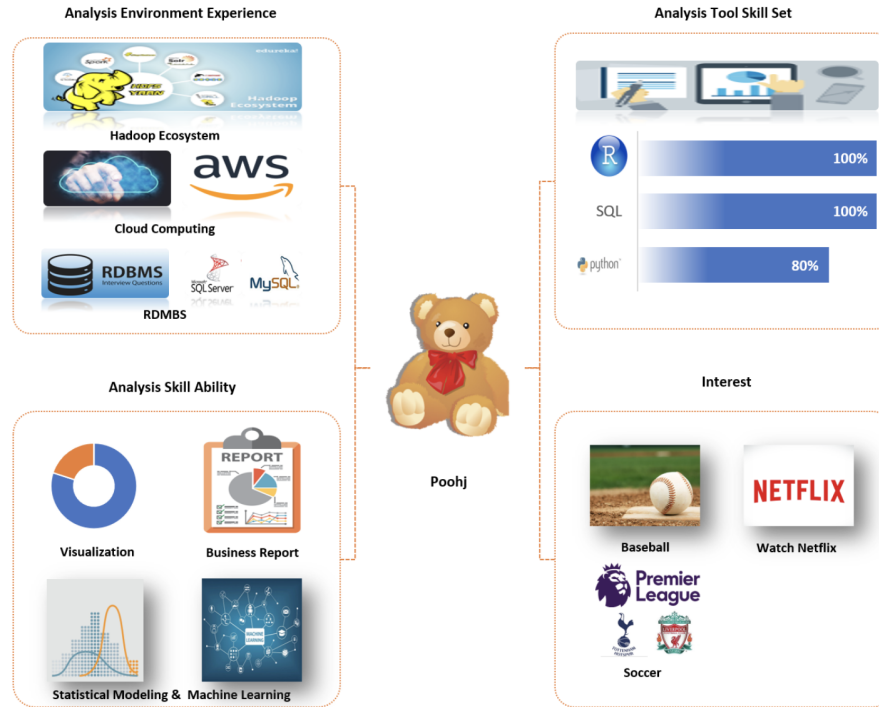
- 이름 : 이준혁
- 거쳐온 회사
  - 네오플
  - 카카오페이
  - 카카오스타일 (구. 크로키닷컴)
  - *Pubg*

# Who Are you?

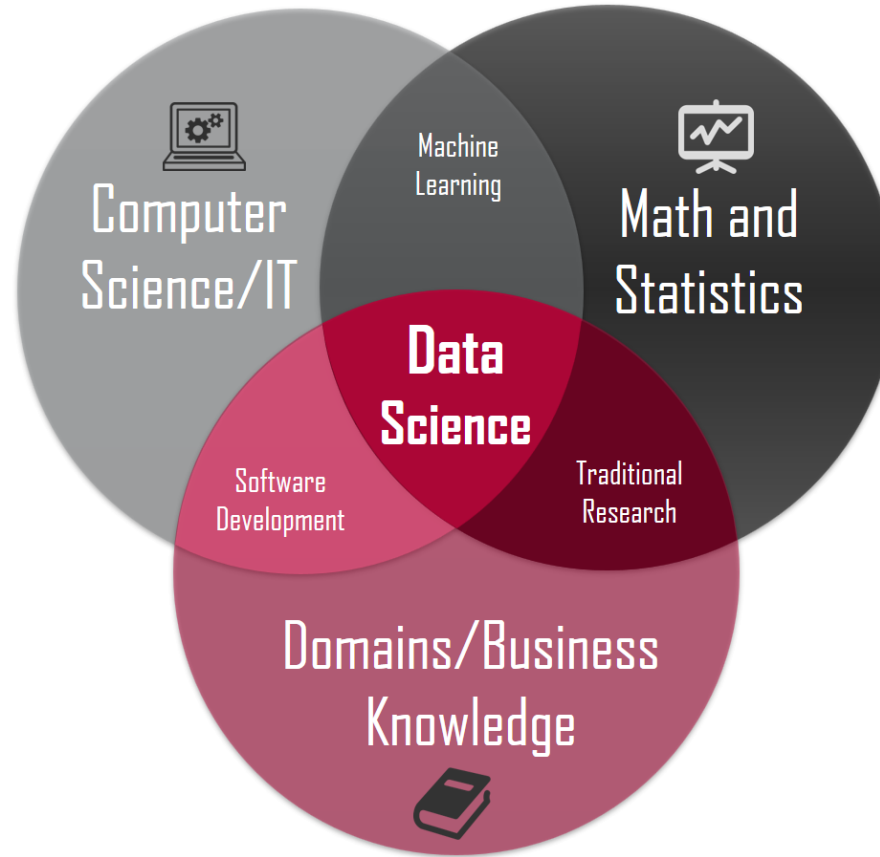
- 이름 : 이준혁
- 수상경력
  - 제 1 회 미니탭 포스터 대회 은상 (주최: 이레테크, 2012-08)
  - 제 1 회 *Bigdata analysis* 분석대회 은상 (주최: Unist, 2012-10)
  - 제 1 회 관광마이닝 대회 동상 (주최: 한국문화관광연구원, 2013-07)
  - 추계 학술논문발표회 대학원생 포스터논문상 2 등 (주최: 한국통계학회, 2013-11)
- 강연 경력
  - R 을 활용한 확률론 및 선형대수 강의 (주최: 패스트캠퍼스, 2016-03)
  - 엑셀을 활용한 기초통계학 강의 (주최: 패스트캠퍼스 & 티켓몬스터, 2016-05)

- **현업에서의 데이터분석 특강 (주최 : 패스트캠퍼스 & 삼성화재, 2016-08)**
- **엑셀을 활용한 기초통계학 실습강의 (주최 : 패스트캠퍼스, 2016-11)**
- ***UseR 2017 Korea – Rshinydashboard* 를 활용한 대시보드 구현 발표 (주최: *KRUG*, 장소 : 서울대 통계학과, 2017-10)**
- *slideshare* : [바로가기](#)
- *Git repository* : [바로가기](#)

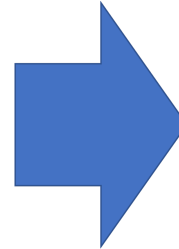
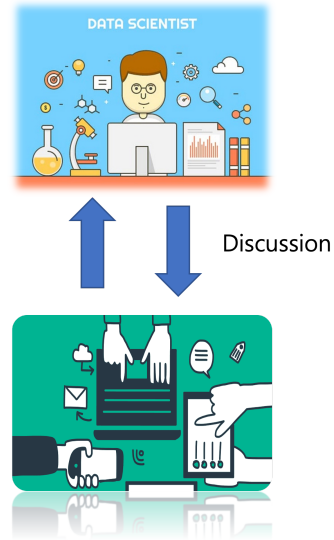
# What's your skill?



# Data Scientist이 보유해야 할 역량



# Data Scientist의 이상

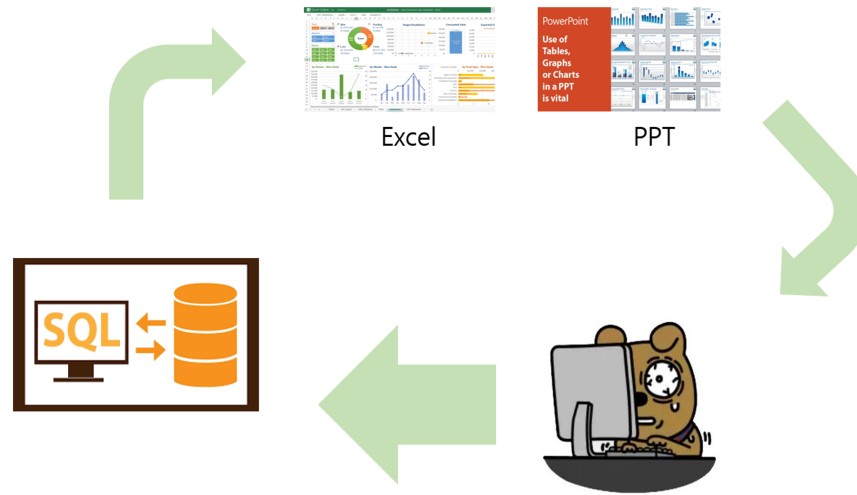


서비스 개선

매출 상승기여

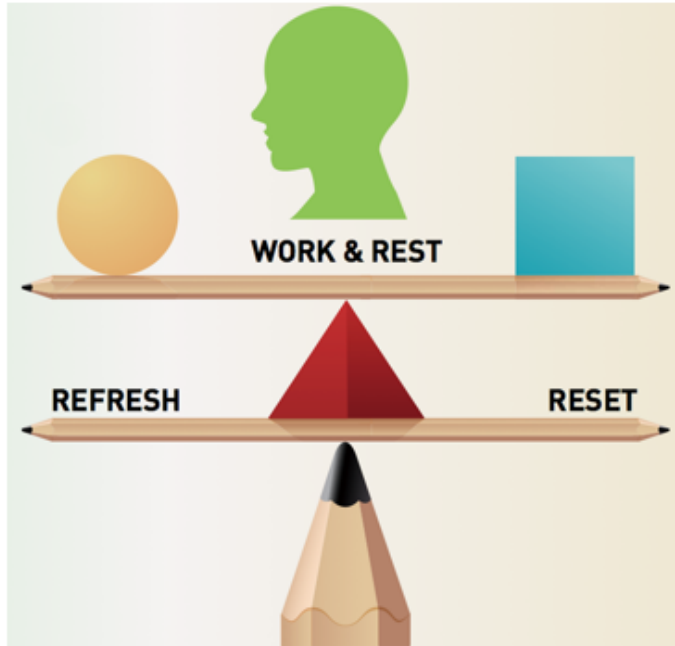
# Data Scientist의 현실

< 데이터 업무의 Cycle >





# 효율성의 고민



# R shiny 의 발견



# R shiny 의 장점

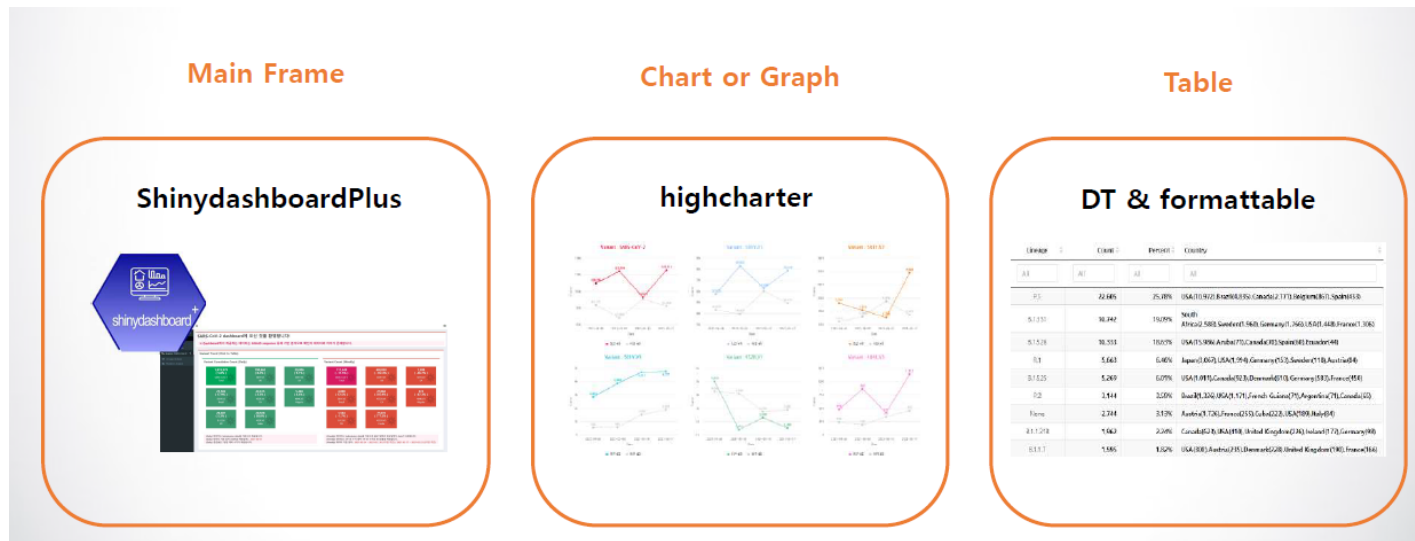
## Why R Shiny for enterprise applications?

This question should be asked for every technology and R Shiny is no different. We believe that Shiny is indeed the ideal choice for many types of projects. By comparing Shiny with other available tools we can determine when to use it.



<https://appilon.com/why-you-should-use-r-shiny-for-enterprise-application-development/>

# R packages for Beautiful dashboard



- R shinydashboard -> AdminLTE 기반의 dashboard 구현을 쉽게 해주는 Package
- highcharter -> Highchart를 R에서 쉽게 구현가능하게 해주는 Package(단, 유료 패키지라는 점 참고!)
- DT -> Data Table format을 유연하게 해주는 Package



**DT****Population****Income****Illiteracy**

	Population		Income		Illiteracy				
Alabama	3615	3624	2.1	69.05	15.1	41.3	20	50708	South
Alaska	365	6315	1.5	69.31	11.3	66.7	152	566432	West
Arizona	2212	4530	1.8	70.55	7.8	58.1	15	113417	West
Arkansas	2110	3378	1.9	70.66	10.1	39.9	65	51945	South
California	21198	5114	1.1	71.71	10.3	62.6	20	156361	West
Colorado	2541	4884	0.7	72.06	6.8	63.9	166	103766	West
Connecticut	3100	5348	1.1	72.48	3.1	56	139	4862	Northe
Delaware	579	4809	0.9	70.06	6.2	54.6	103	1982	South
Florida	8277	4815	1.3	70.66	10.7	52.6	11	54090	South
Georgia	4931	4091	2	68.54	13.9	40.6	60	58073	South



# 테이블을 다운받게도 가능합니다.

Copy

Print

CSV

Excel

PDF

Search:

			Population		Income		Illiteracy		
Alabama	3615	3624	2.1	69.05	15.1	41.3	20	50708	Sou
Alaska	365	6315	1.5	69.31	11.3	66.7	152	566432	Wes
Arizona	2212	4530	1.8	70.55	7.8	58.1	15	113417	Wes
Arkansas	2110	3378	1.9	70.66	10.1	39.9	65	51945	Sou
California	21198	5114	1.1	71.71	10.3	62.6	20	156361	Wes

Showing 1 to 8 of 50 entries

Previous

1

2

3

4

5

6

7

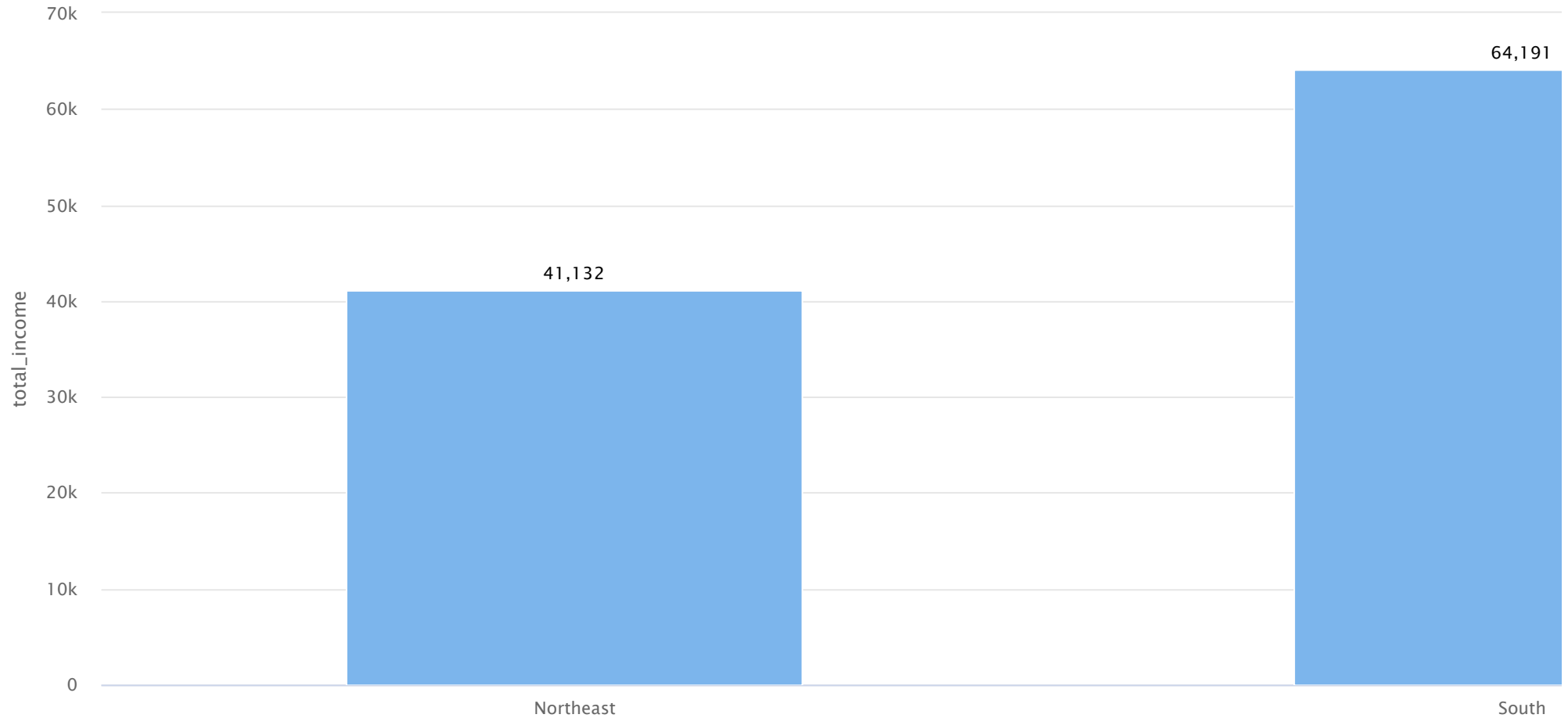
Next

활용라이브러리 : DT





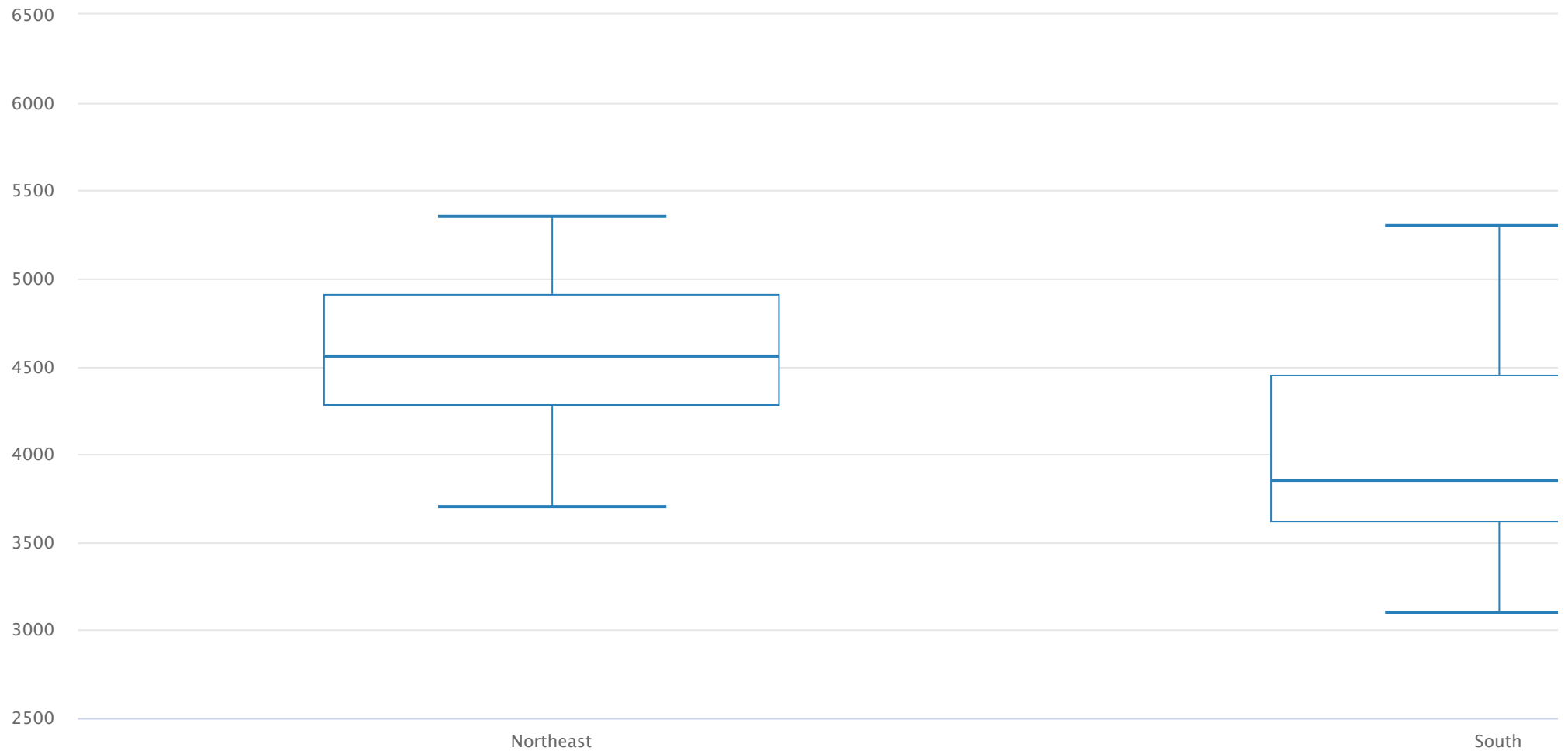
# barchart(highchart)



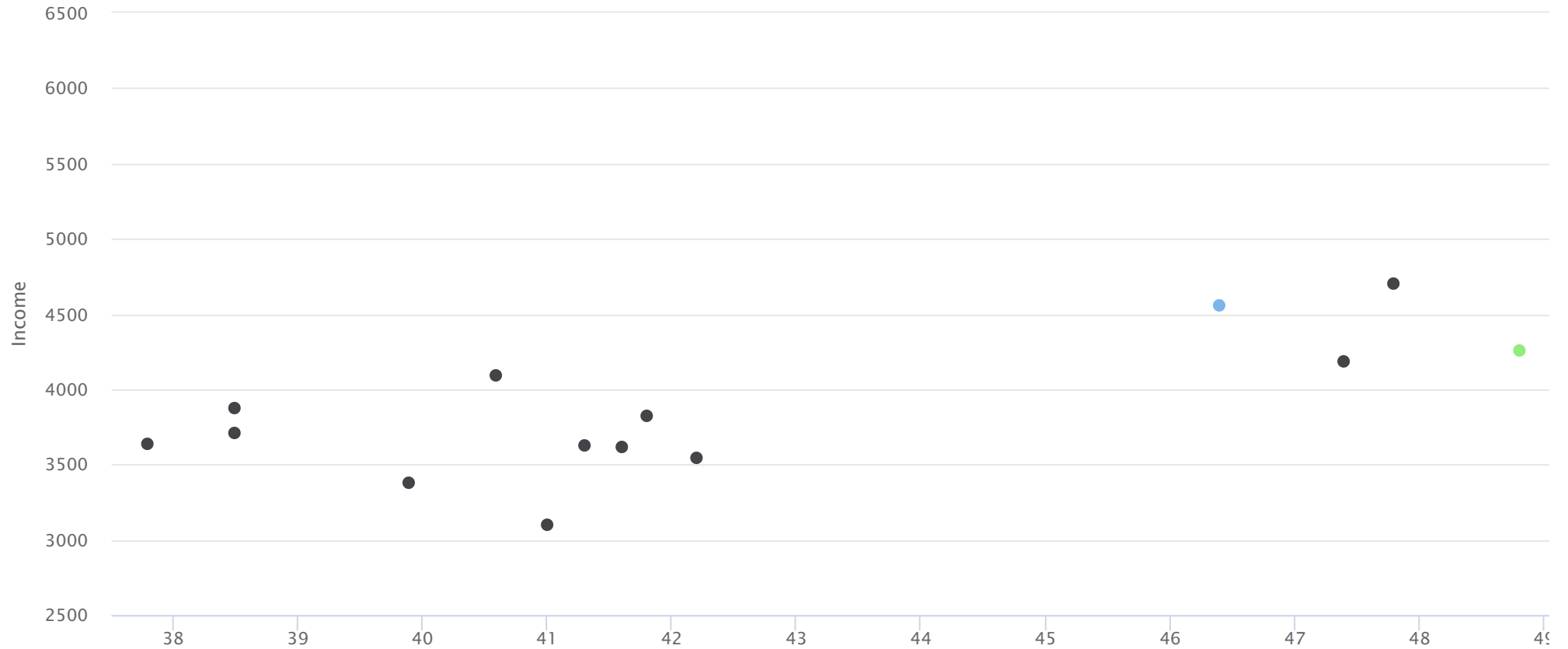
지역별 수입



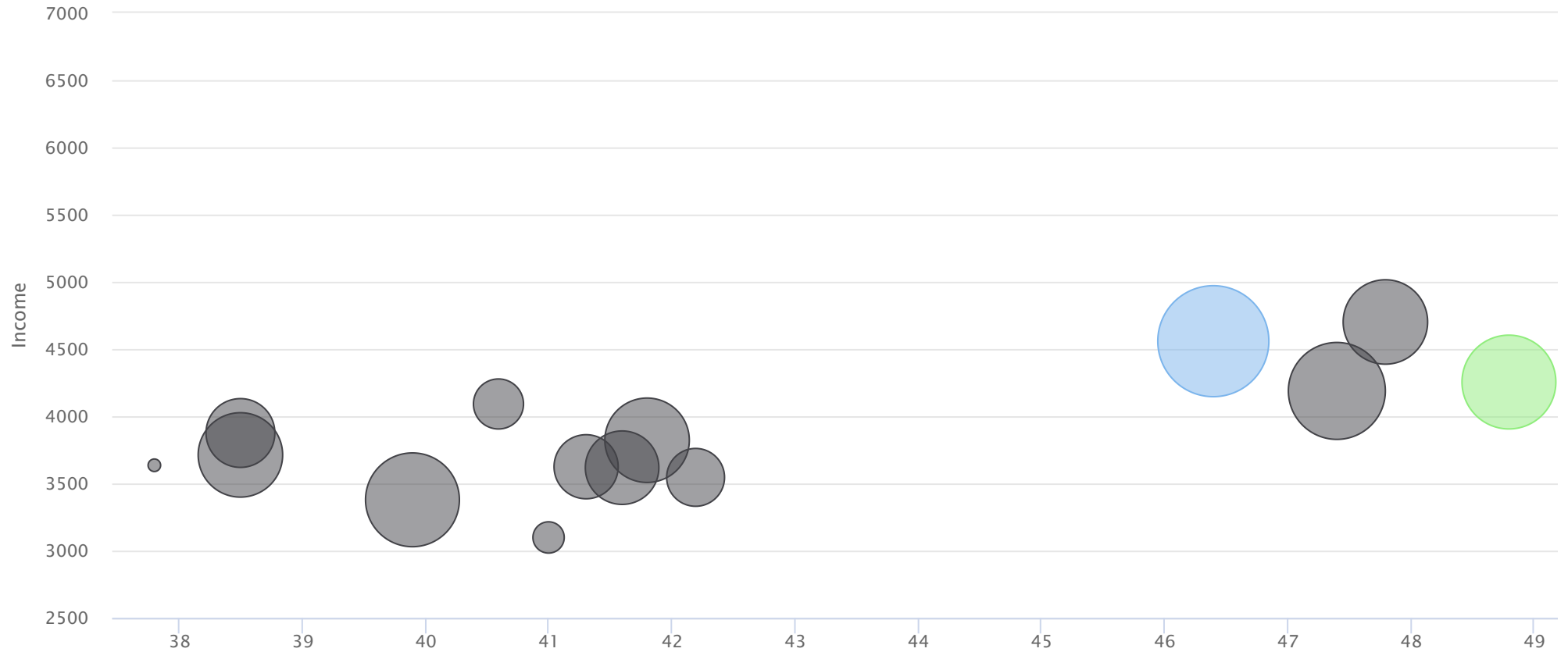
# box-plot(highchart)



# scatter plot(highchart)



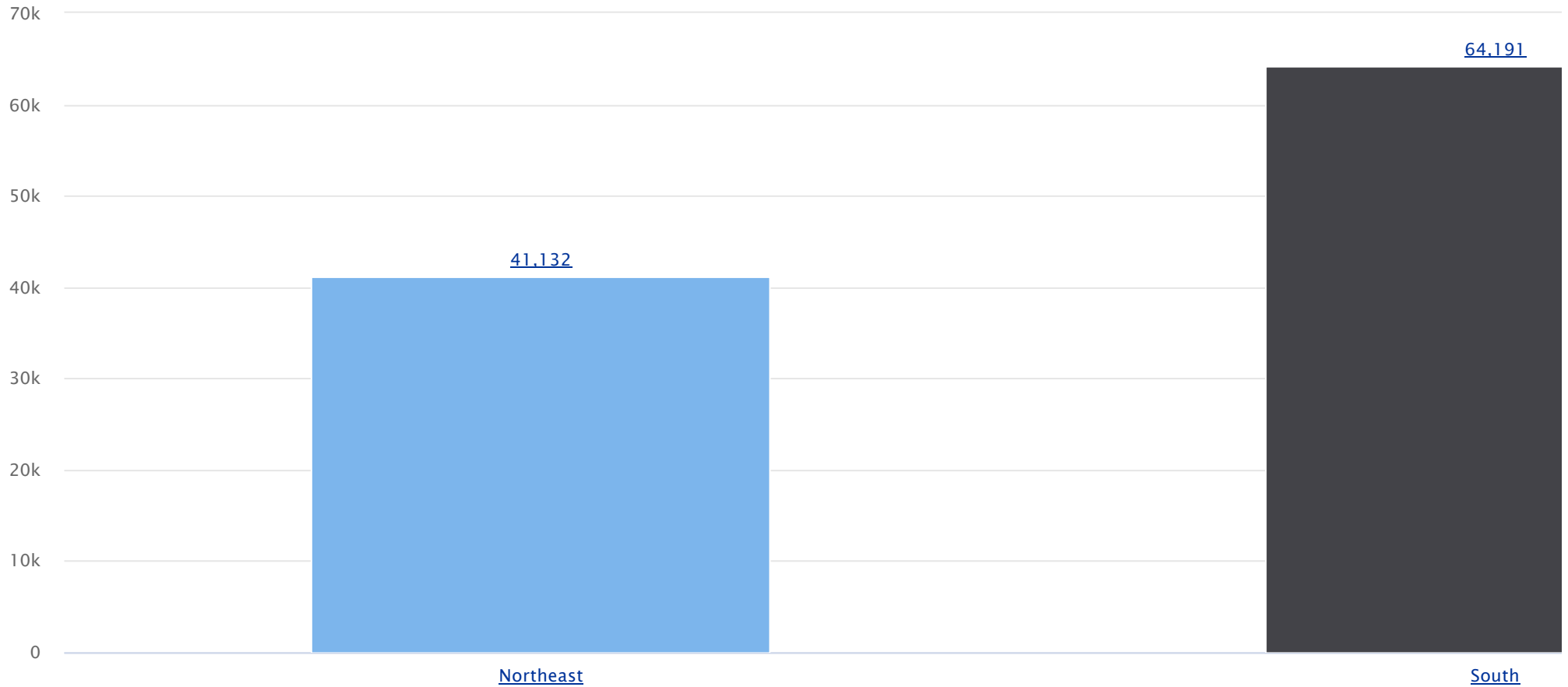
# bubble plot(highchart)



# map plot(highchart)



# Drill Down도 가능하답니다.





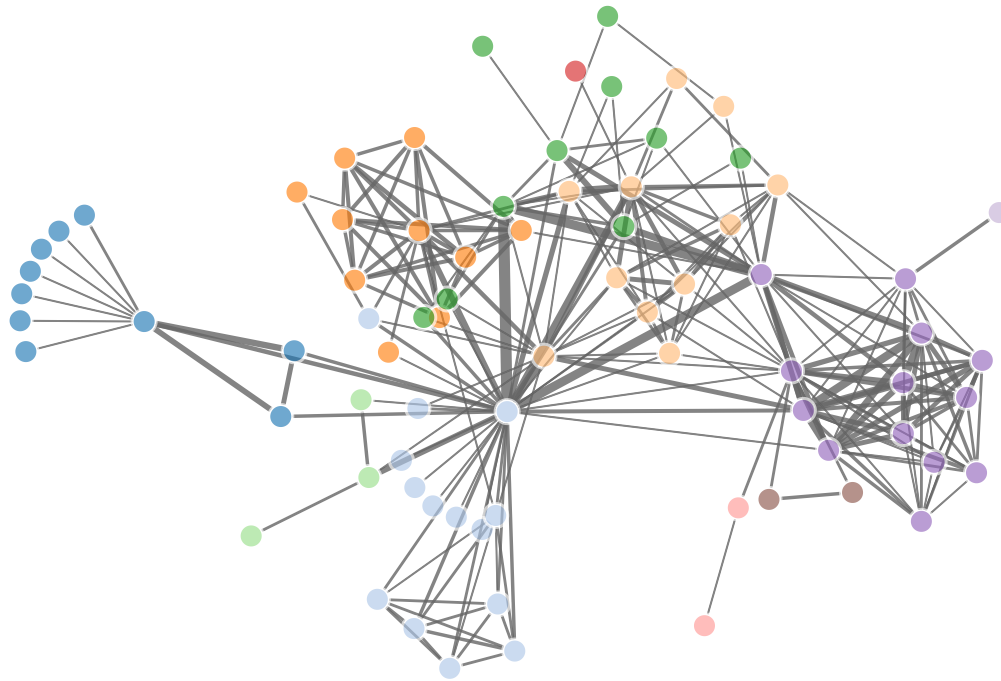
# sunburst plot

Legend



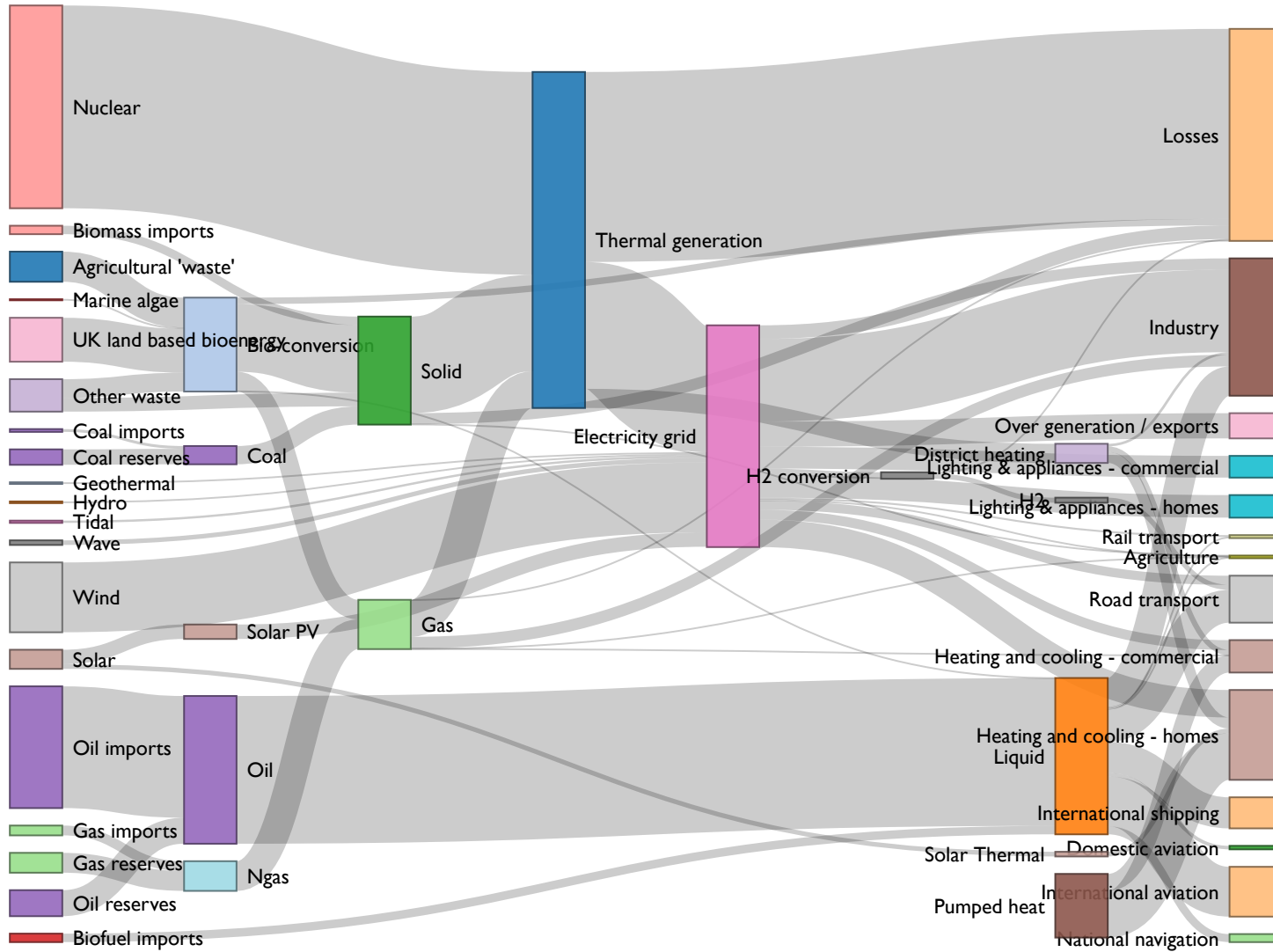


# network plot





# sankey plot





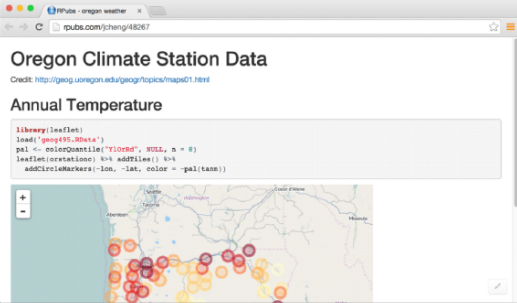
# 더많은 참고자료는 여기에 많아요

**Bring the best of JavaScript data visualization to R**

Use JavaScript visualization libraries at the R console, just like plots

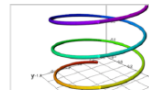
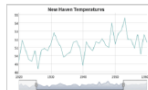
Embed widgets in R Markdown documents and Shiny web applications

Develop new widgets using a framework that seamlessly bridges R and JavaScript



At the R console   In R Markdown docs   In Shiny apps

## Widgets in action

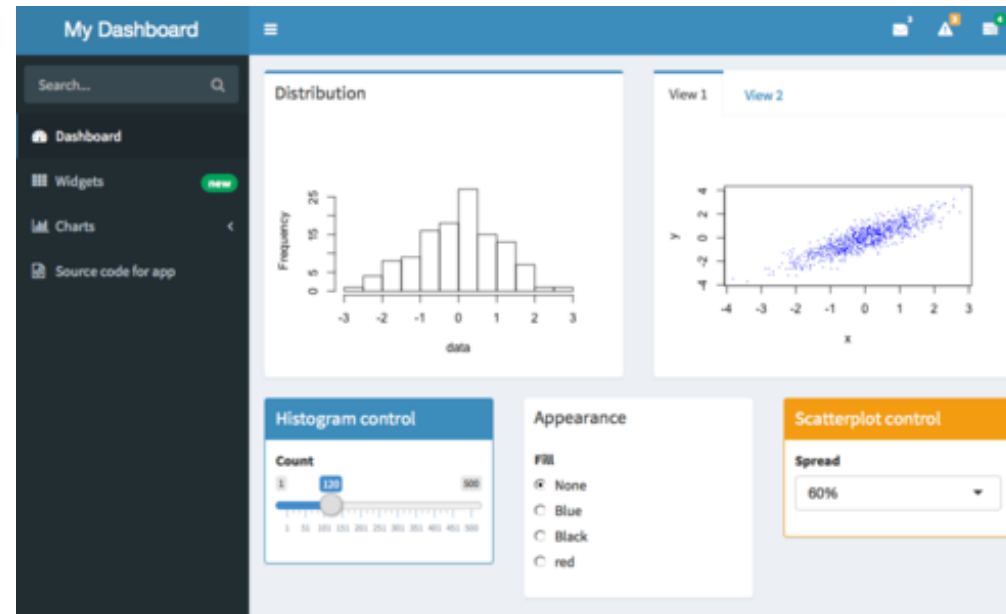


Just a line or two of R code can be used to create interactive visualizations. See the featured widgets in the [showcase](#) and browse over 50 available widgets in the [gallery](#).

[See the showcase »](#)

출처 : <http://www.htmlwidgets.org/>

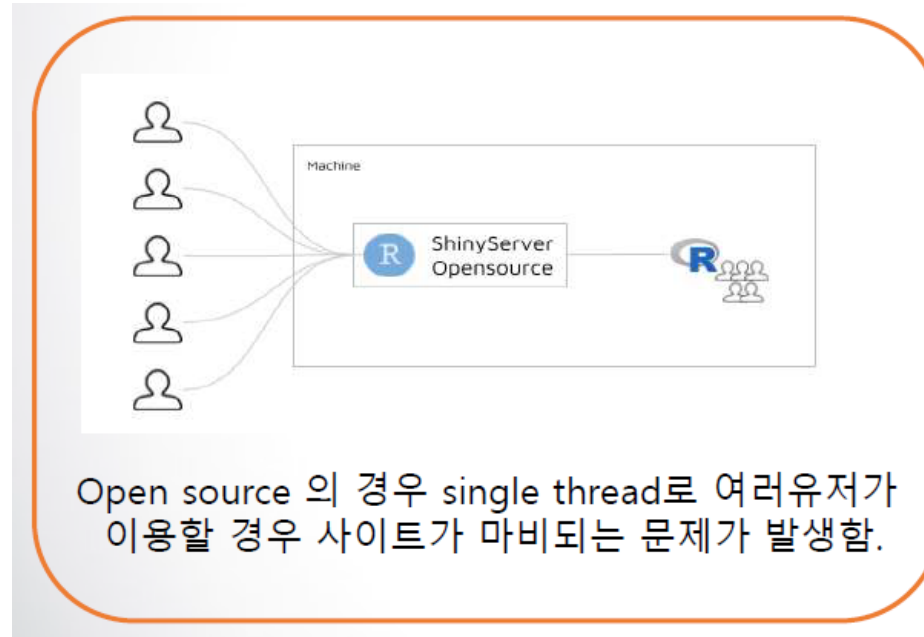
# shinydashboard 예시



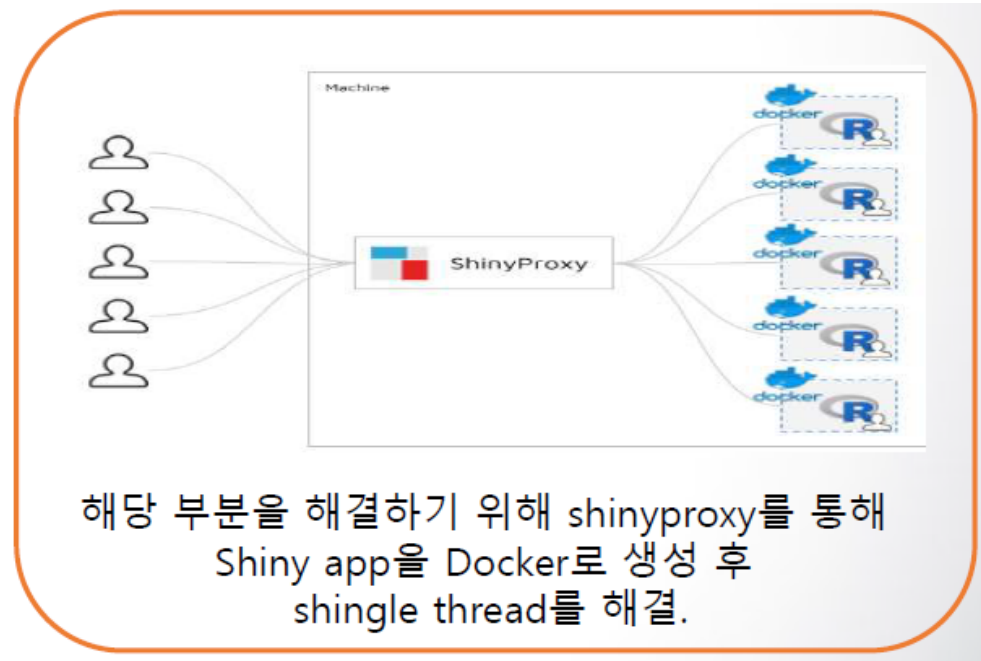
출처 : <https://rstudio.github.io/shinydashboard/>



# shiny server opensource의 한계점

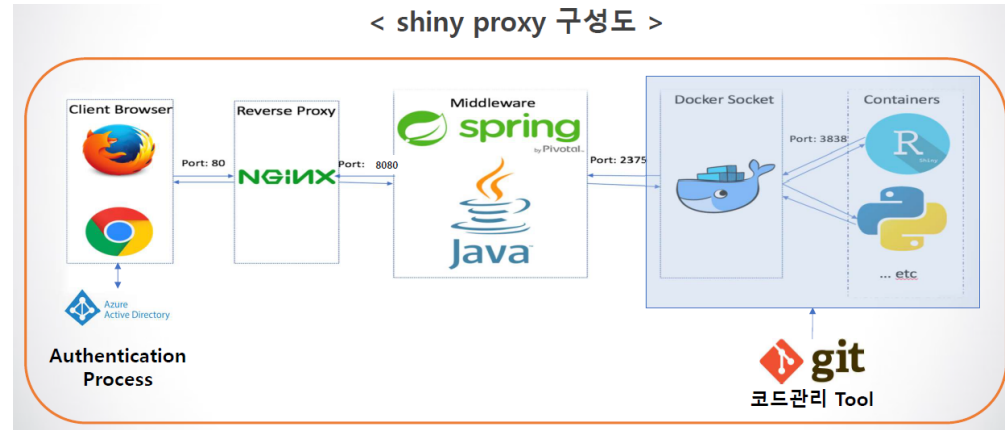


# shiny proxy로 Single Thread 해결



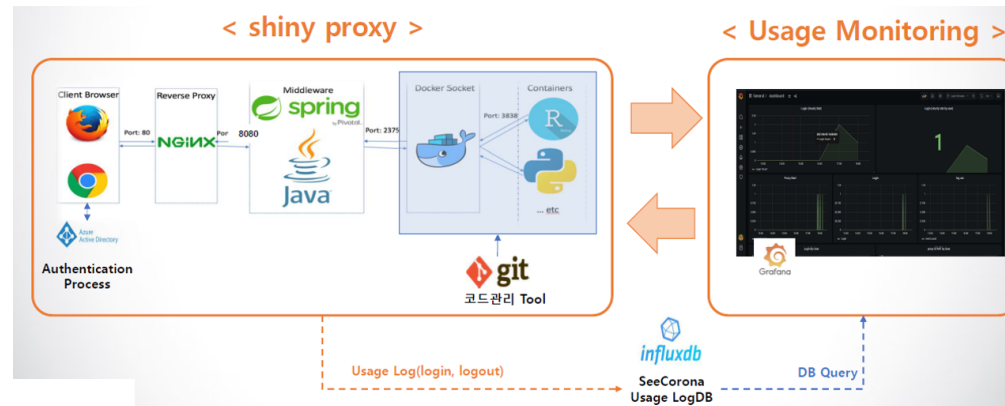
출처 : <https://shinyproxy.io/>

# shiny proxy roadmap



출처 : <https://shinyproxy.io/>

# shiny proxy full roadmap



출처 : <https://shinyproxy.io/>

# shiny proxy docker file create

```
FROM openanalytics/r-base

LABEL maintainer "Tobias Verbeke <tobias.verbeke@openanalytics.eu>"

# system libraries of general use
RUN apt-get update && apt-get install -y \
    sudo \
    pandoc \
    pandoc-citeproc \
    libcurl4-gnutls-dev \
    libcairo2-dev \
    libxt-dev \
    libssl-dev \
    libssh2-1-dev \
    libssl1.0.0

# system library dependency for the euler app
RUN apt-get update && apt-get install -y \
    libmpfr-dev

# basic shiny functionality
RUN R -e "install.packages(c('shiny', 'rmarkdown'), repos='https://cloud.r-project.org/')"

# install dependencies of the euler app
RUN R -e "install.packages('Rmpfr', repos='https://cloud.r-project.org/')"

# copy the app to the image
RUN mkdir /root/euler
COPY euler /root/euler

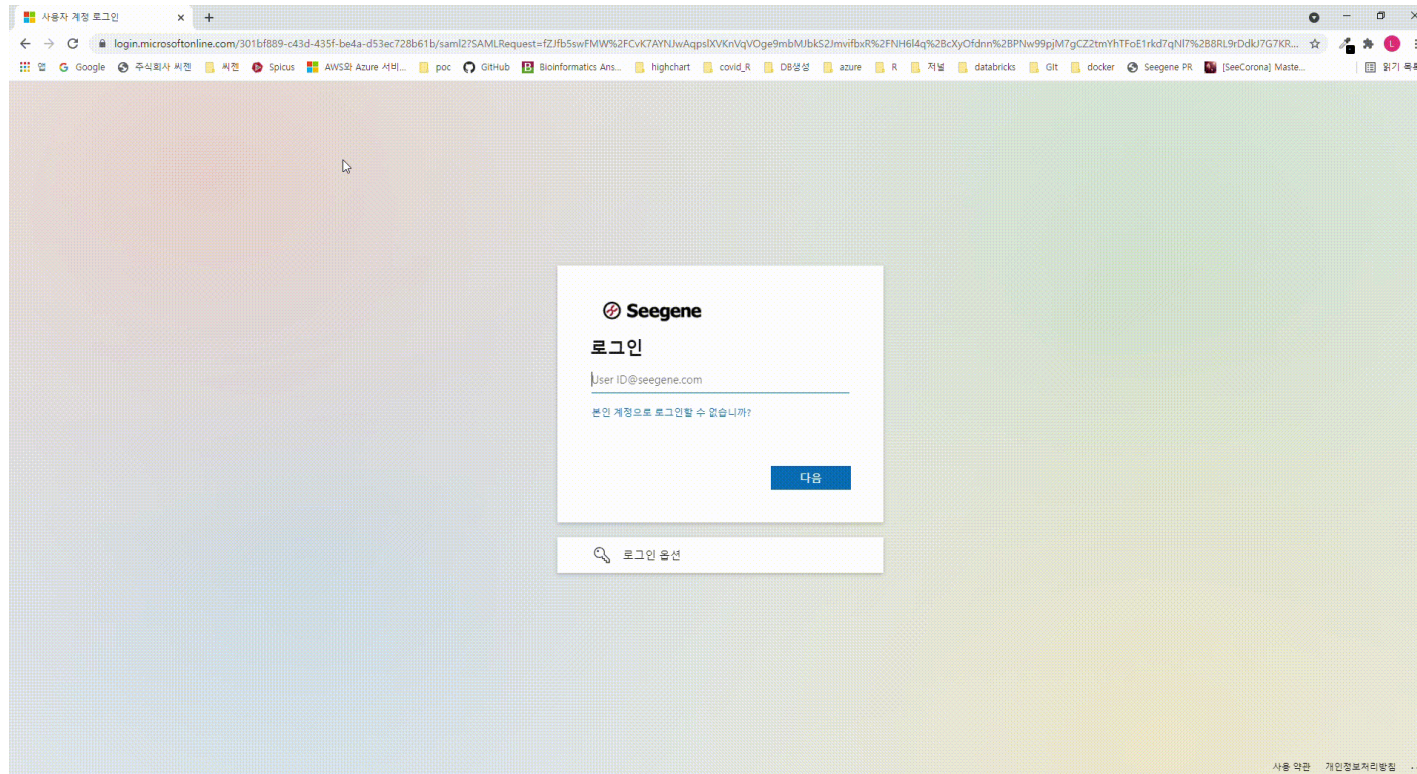
COPY Rprofile.site /usr/lib/R/etc/

EXPOSE 3838

CMD ["R", "-e", "shiny::runApp('/root/euler')"]
```

출처 : <https://shinyproxy.io/>

# shiny proxy example(Full)



# shiny proxy example(data driven)

The screenshot shows a web browser window displaying a Shiny proxy application for Seegene. The browser's address bar shows the URL `192.168.108.10:3838/dashboard/`. The application interface includes a sidebar with navigation options like 'Dashboard (SARS-CoV-2)', 'Variant Summary', 'Lineage Coverage', and 'Mutation Analysis'. The main content area is titled '조건 설정' (Condition Setting) and features a date selector set to '2021-10-10' and a 'Lineage\_list' input field containing 'A \* AY.x'. A 'Go!' button is positioned below the input field. A pink-shaded instruction box provides steps for using the chart: Step 1 involves selecting a date and lineage, Step 2 involves dragging a selection area on the chart to view a table, and Step 3 involves clicking a row in the table to view mutation details. Below the instructions, there are tabs for 'Mutation Prevalence by lineage(Group)' and 'Mutation Prevalence by lineage(Elements)'. The 'Mutation Prevalence by lineage(Group)' tab is active, showing a table with a column labeled 'In\_Coverage\_Rate'.