Interim Report

Perseverance

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PERSEVERANCE

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CONTENTS

PROJECT DESCRIPTION:

#PROJECT GOALS

On the efficiency of university choices;

When our perceptions are not yet developed, as a young child, the adventure of educational life begins with an apron on us and a heavy bag on our backs. For many years, we spend the most valuable time of our lives on this adventure. Over the years, we realize that the meaning of the word 'education' will be exactly what we call 'life' in the future.

There is a huge economic sector behind education, which is a reality that affects life so much in this long-term journey. On this journey from childhood to the middle of youth, there are not only millions of students but also their families. Huge sums of money are spent on this highly hopeful reality. These children are becoming a part of this industry, which is expressed in billions of dollars. There are huge costs in pursuing their hopes and lives.

Some families have difficulty in making these expenses, some children do not have families. Undoubtedly, the most important moment of this road, which has been reached with a countless difficulties, is the step of entering the university.

As Perseverance Team, we want to focus on education. We want the money spent in this great industry to pay off. We want efforts and hope to turn into lives.

A leading career site of this sector in Turkey, examined the 10-year movements of employers and compiled and shared meaningful data. We immediately realized that these data are very important and the following question came to mind:

"Can students make a better choice?"

Students do not have sufficient knowledge and equipment when making their university choices. Even worse, parents are simply ignorant of what is true. This creates anxiety and exam anxiety continues in the preference period.

The basic criterion when making a choice is determined according to where the students who have had that score in the past years preferred. The perception that 'my score should not be burned' directs students to departments they do not want, and moreover, to wrong choices. The anxiety in the preference period is again encountered when students graduate: Will I be able to find a job?

The "Employer Interest Index" published in 2020 by Turkey's leading employment platform Kariyer.net, sheds light on exactly this problem. In this study, Kariyer.net examined 200 million transactions of 486 thousand employer users who searched for their new employees in the last 10 years. Later, it tried to make sense of these movements by matching the information in the resumes of the candidates. It determined the employment rate of the graduates in the first 2 years following their university graduation and the amount of interest the employers have for which university or department graduates. In the light of this information, it created 3 different rankings.

In the light of these resulting data, we will evaluate the accuracy of students' preferences while entering the university. We will find an answer to the question of whether a better choice could be made when evaluating students' university preferences. In the future, we will help students to make the right choice with this unique work.

PROJECT DATA:

- Kariyer.net Employer Interest Index
- ÖSYM Placement Results

HAS THE DATA SET CHANGED? YES

As the employer data on Kariyer.net site was updated, we updated the data according to the 2020 data.

HAVE YOU DECIDED TO DO DIFFERENT ANALYSIS?

No.

ACTIONS

We handled the project in 3 stages:

- At the first stage, we looked at which university and which departments the employers are interested in. We tried to determine the basic motivations of employers.
- In the second stage, we compared employers 'preferences with students' preferences. We applied certain filters in order to give better results to the data and proceeded through certain universities and certain departments. We created a "Student Interest Index" by taking the average of the total scores of all departments in a university over the base scores of the universities. We created a "Student Interest Index" for departments by applying a similar practice on departments. Thus, we were able to make a comparison thanks to the interest indexes of both employers and students.
- In the third stage, we will make a joint evaluation of the university and the department.

PRELIMINARY RESULTS:

SOME OF THE IMPORTANT DATA:

- There are basically correlations in the movements of students and employers, but the differences are also very suitable for a serious population to make a big change in their lives by making better choices.

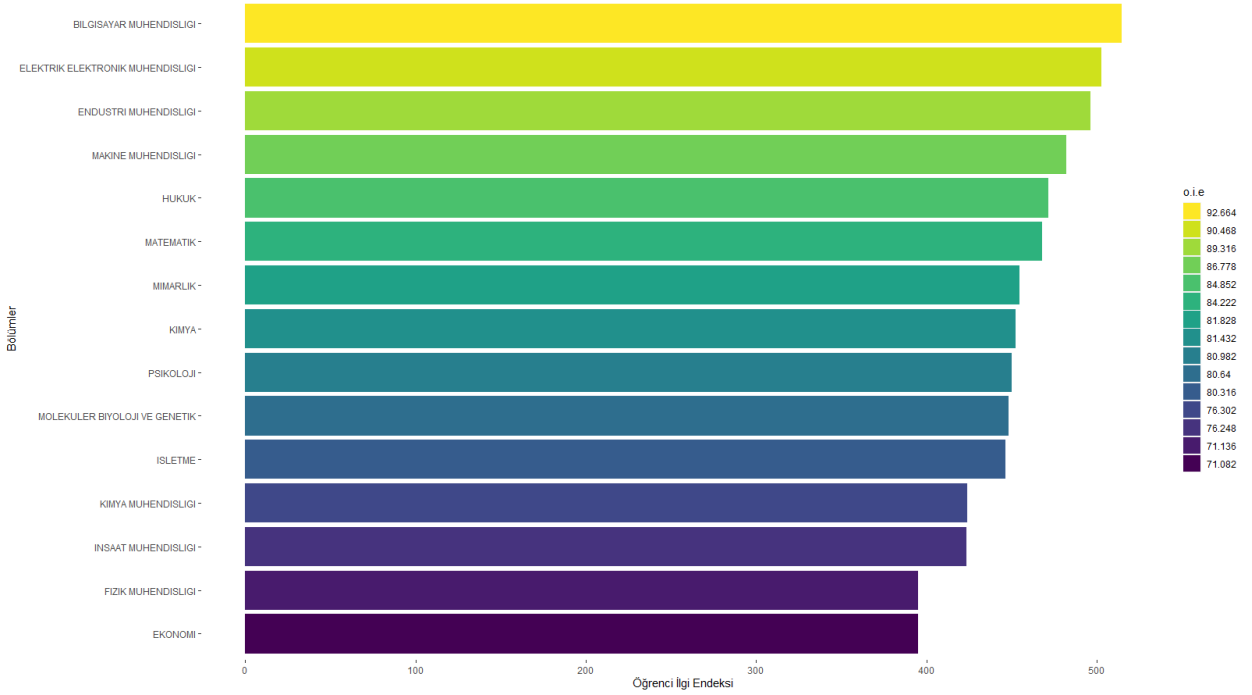
- At the point of recruiting, proximity to the location of the job has great importance.
- Foreign language is very important. Students of institutions, that providing alternative foreign language (German, French) education, have a great advantage.
- Prestigious schools are the choice of both students and employers.

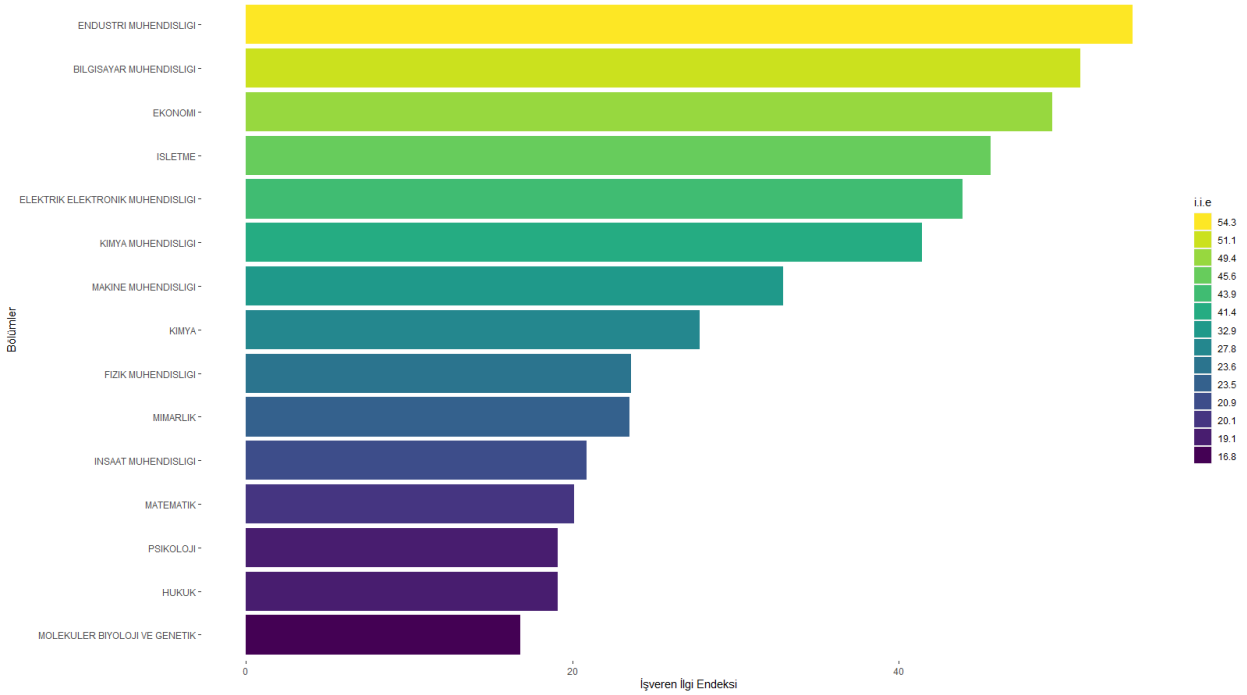
PLANNED FUTURE STUDY

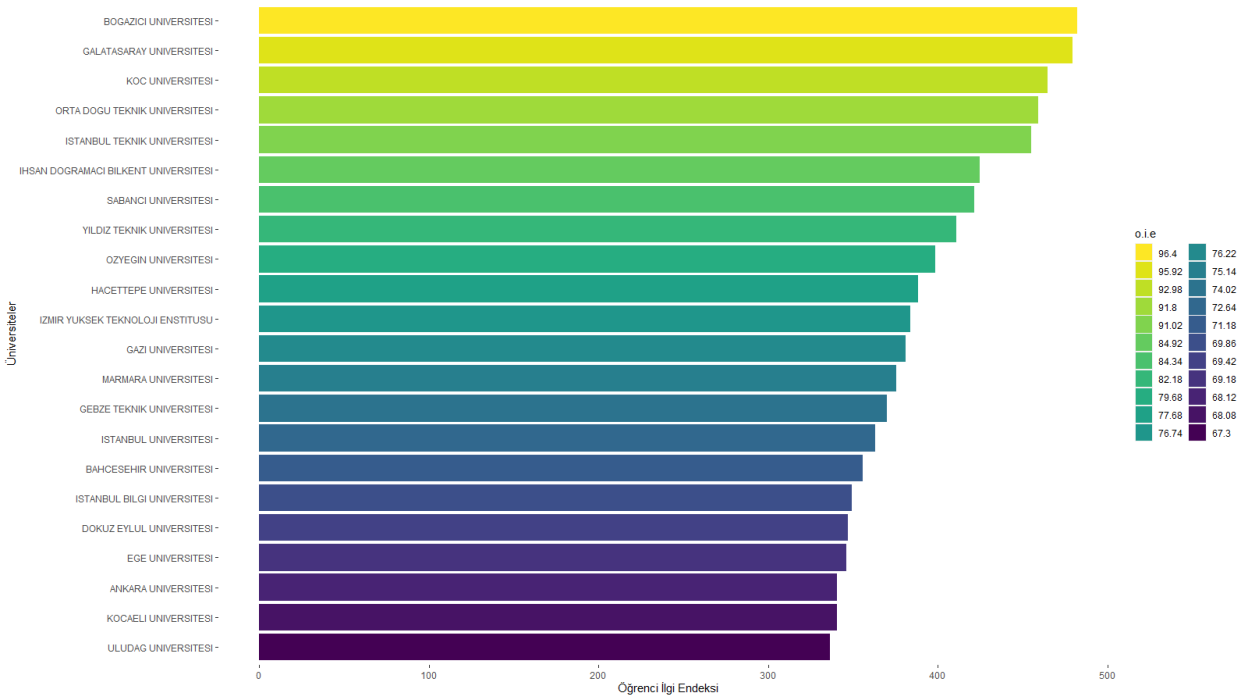
- We will do some applications in order to give better results to these studies. We will minimize the problems by making error analysis.
- We will compose a list by comparing the base score of a particular department of a particular university with the employer indices. Thus, we plan to obtain clearer results.
- We will make comparisons of derivative departments (business engineering, mathematics engineering, control automation engineer, etc.) by taking them into consideration.

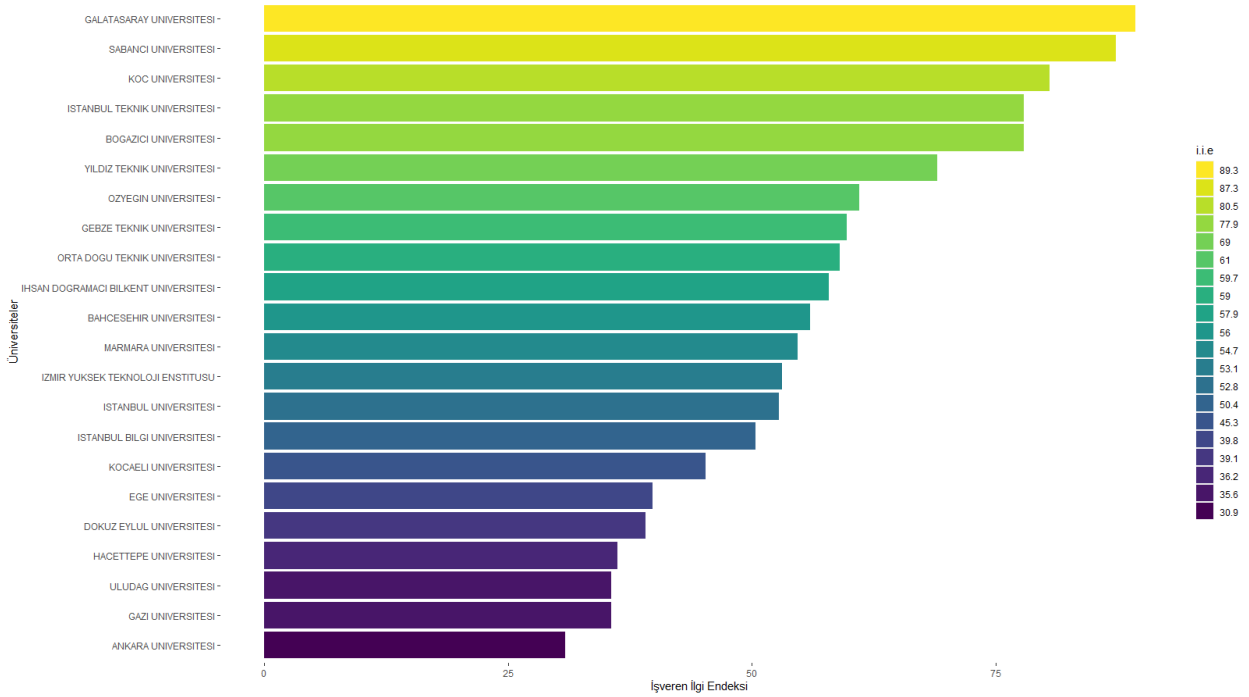
CONCLUSION

We wanted to share some images from the results we obtained for intermediate results:




ENDUSTRI MUHENDISLIGI
BILGISAYAR MUHENDISLIGI
EKONOMI
ISLETME
ELEKTRIK ELEKTRONIK MUHENDISLIGI
KIMYA MUHENDISLIGI
MAKINE MUHENDISLIGI
KIMYA
FIZIK MUHENDISLIGI
MIMARLIK
INSAAT MUHENDISLIGI
MATEMATIK
PSIKOLOJI
HUKUK
MOLEKULER BIYOLOJI VE GENETIK
Bölümler
0
20
40
İşveren İlgi Endeksi
i.i.e
54.3
51.1
49.4
45.6
43.9
41.4
32.9
27.8
23.6
23.5
20.9
20.1
19.1
16.8


BOGAZICI UNIVERSITESI
GALATASARAY UNIVERSITESI
KOC UNIVERSITESI
ORTA DOGU TEKNIK UNIVERSITESI
ISTANBUL TEKNIK UNIVERSITESI
IHSAN DOGRAMACI BILKENT UNIVERSITESI
SABANCI UNIVERSITESI
YILDIZ TEKNIK UNIVERSITESI
OZYEGIN UNIVERSITESI
HACETTEPE UNIVERSITESI
IZMIR YUKSEK TEKNOLOJI ENSTITUSU
GAZI UNIVERSITESI
MARMARA UNIVERSITESI
GEBZE TEKNIK UNIVERSITESI
ISTANBUL UNIVERSITESI
BAHCESEHIR UNIVERSITESI
ISTANBUL BILGI UNIVERSITESI
DOKUZ EYLUL UNIVERSITESI
EGE UNIVERSITESI
ANKARA UNIVERSITESI
KOCAELI UNIVERSITESI
ULUDAG UNIVERSITESI
Üniversiteler
0
100
200
300
400
500
Öğrenci İlgi Endeksi
o.i.e
96.4
95.92
92.98
91.8
91.02
84.92
84.34
82.18
79.68
77.68
76.74
76.22
75.14
74.02
72.64
71.18
69.86
69.42
69.18
68.12
68.08
67.3



REFERENCES

- https://bookdown.org/ugurdarr/cubukgrafigi/
- https://r338.github.io/ab-2017/dokumanlar/dokuman_ggplot2.html
- https://www.veribilimiokulu.com/r-ile-veri-gorsellestirme/
- https://bookdown.org/content/2096/temel-r.html

CODES

```
ankara <- read_excel("database/uni/ankara.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
ankara <- ankara[-c(11,13,18,20,28:30,58,59,104,105,122:126),c(3,5,10)]
ogrenci_ankara <- mean(ankara$`En Düşük Puan`)
ilgi_ankara<- c("ANKARA UNIVERSITESI", ogrenci_ankara)
```

```
bahcesehir<- read_excel("database/uni/bahcesehir.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
bahcesehir<- bahcesehir[,c(3,5,10)]
ogrenci_bahcesehir<- mean((bahcesehir$`En Düşük Puan`))
ilgi_bahcesehir<- c("BAHCESEHIR UNIVERSITESI", ogrenci_bahcesehir)
ilgi_uni<- rbind(ilgi_ankara, ilgi_bahcesehir)
```

```
bilgi<- read_excel("database/uni/bilgi.xlsx")
```

```
## New names:
```

```
## * `` -> ...8
## * `` -> ...13
```

```
bilgi<- bilgi[,c(3,5,10)]
ogrenci_bilgi<-mean(bilgi$`En Düşük Puan`)
ilgi_bilgi<- c("ISTANBUL BILGI UNIVERSITESI", ogrenci_bilgi)
```

```
bilkent <- read_excel("database/uni/bilkent.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
bilkent<- bilkent[,c(3,5,10)]
ogrenci_bilkent<- mean(bilkent$`En Düşük Puan`)
ilgi_bilkent<- c("IHSAN DOGRAMACI BILKENT UNIVERSITESI", ogrenci_bilkent)
```

```
bogazici <- read_excel("database/uni/bogazici.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
bogazici<- bogazici[-c(30,31,36),c(3,5,10)]
ogrenci_bogazici<- mean(bogazici$`En Düşük Puan`)
ilgi_bogazici<- c("BOGAZICI UNIVERSITESI", ogrenci_bogazici)
```

```
dokuzeylul <- read_excel("database/uni/dokuzeylul.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
dokuzeylul<- dokuzeylul[-c(8,27:30,34,36,38:40,43,44,53,62,97,96,98:100),c(3,5,10)]
ogrenci_dokuzeylul<- mean(dokuzeylul$`En Düşük Puan`)
ilgi_dokuzeylul<- c("DOKUZ EYLUL UNIVERSITESI", ogrenci_dokuzeylul)
```

```
ege <- read_excel("database/uni/ege.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
ege<- ege[-c(12,16,20,36,44,61:64),c(3,5,10)]
ogrenci_ege<- mean(ege$`En Düşük Puan`)
ilgi_ege<- c("EGE UNIVERSITESI", ogrenci_ege)
```

```
galatasaray <- read_excel("database/uni/galatasaray.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
galatasaray<- galatasaray[,c(3,5,10)]
ogrenci_galatasaray<- mean(galatasaray$`En Düşük Puan`)
ilgi_galatasaray<- c("GALATASARAY UNIVERSITESI", ogrenci_galatasaray)
```

```
gazi <- read_excel("database/uni/gazi.xlsx")
```

```
## New names:
```

```
## * `` -> ...8
## * `` -> ...13
```

```
gazi<- gazi[-c(2,14,38,42,52:56,61,63,64),c(3,5,10)]
ogrenci_gazi<- mean(gazi$`En Düşük Puan`)
ilgi_gazi<- c("GAZI UNIVERSITESI", ogrenci_gazi)
```

```
gyte <- read_excel("database/uni/gyte.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
gyte<- gyte[,c(3,5,10)]
ogrenci_gyte<- mean(gyte$`En Düşük Puan`)
ilgi_gyte<- c("GEBZE TEKNIK UNIVERSITESI", ogrenci_gyte)
```

```
hacettepe <- read_excel("database/uni/hacettepe.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
hacettepe<- hacettepe[-c(12,59,71:73),c(3,5,10)]
ogrenci_hacettepe<- mean(hacettepe$`En Düşük Puan`)
ilgi_hacettepe<- c("HACETTEPE UNIVERSITESI", ogrenci_hacettepe)
```

```
itu <- read_excel("database/uni/itu.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
itu<- itu[-c(2,3,43,48,52:63),c(3,5,10)]
ogrenci_itu<- mean(itu$`En Düşük Puan`)
ilgi_itu<- c("ISTANBUL TEKNIK UNIVERSITESI", ogrenci_itu)
```

```
iu <- read_excel("database/uni/iu.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
iu<- iu[-c(23,24,26,53:68,71,85,93,99:103,104,141:144),c(3,5,10)]
ogrenci_iu<- 363.2045
ilgi_iu<- c("ISTANBUL UNIVERSITESI", ogrenci_iu  )
```

85,93,99:103,104,141:144)

```
iyte <- read_excel("database/uni/iyte.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
iyte<- iyte[-c(17,20),c(3,5,10)]
ogrenci_iyte<- mean(iyte$`En Düşük Puan`)
ilgi_iyte<- c("IZMIR YUKSEK TEKNOLOJI ENSTITUSU", ogrenci_iyte)
```

```
koc <- read_excel("database/uni/koc.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
koc<- koc[,c(3,5,10)]
ogrenci_koc<- mean(koc$`En Düşük Puan`)
ilgi_koc<- c("KOC UNIVERSITESI", ogrenci_koc)
```

```
kocaeli <- read_excel("database/uni/kocaeli.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
kocaeli<- kocaeli[-c(8,14,18,19,21,23,24,26,27,30,34,44,47,57,59,62,66,67,68,80,81),c(3,5,10)]
ogrenci_kocaeli<- mean(kocaeli$`En Düşük Puan`)
ilgi_kocaeli<- c("KOCAELI UNIVERSITESI",ogrenci_kocaeli )
```

```
marmara <- read_excel("database/uni/marmara.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
marmara<- marmara[-c(9,25,26,36:38,63,66,67,69,70,79,81,91),c(3,5,10)]
ogrenci_marmara<- mean(marmara$`En Düşük Puan`)
ilgi_marmara<- c("MARMARA UNIVERSITESI", ogrenci_marmara)
```

```
odtu <- read_excel("database/uni/odtu.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
odtu<- odtu[-c(2,3,11:19,36,49:56),c(3,5,10)]
ogrenci_odtu<- mean(odtu$`En Düşük Puan`)
ilgi_odtu<- c("ORTA DOGU TEKNIK UNIVERSITESI", ogrenci_odtu)
```

```
ozyegin <- read_excel("database/uni/ozyegin.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
ozyegin<- ozyegin[,c(3,5,10)]
ogrenci_ozyegin<- mean(ozyegin$`En Düşük Puan`)
ilgi_ozyegin<- c("OZYEGIN UNIVERSITESI", ogrenci_ozyegin )
```

```
sabanci <- read_excel("database/uni/sabanci.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
sabanci <- sabanci[,c(3,5,10)]
ogrenci_sabanci <-mean(sabanci$`En Düşük Puan`)
ilgi_sabanci <- c("SABANCI UNIVERSITESI", ogrenci_sabanci)
```

```
turkalman <- read_excel("database/uni/turkalman.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
turkalman<- turkalman[,c(3,5,10)]
ogrenci_turkalman <-mean(turkalman$`En Düşük Puan`)
ilgi_turkalman<- c("TURK-ALMAN UNIVERSITESI", ogrenci_turkalman)
```

```
uludag <- read_excel("database/uni/uludag.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
uludag <- uludag[-c(15, 16, 22, 23, 25, 26, 29, 32, 40, 42, 61, 68, 71, 75, 76),c(3,5,10)]
ogrenci_uludag <- mean(uludag$`En Düşük Puan`)
ilgi_uludag<- c("ULUDAG UNIVERSITESI", ogrenci_uludag)
```

```
yildiz <- read_excel("database/uni/yildiz.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
yildiz<- yildiz[-c(35, 51, 52),c(3,5,10)]
ogrenci_yildiz <- mean(yildiz$`En Düşük Puan`)
ilgi_yildiz <- c("YILDIZ TEKNIK UNIVERSITESI", ogrenci_yildiz)
```

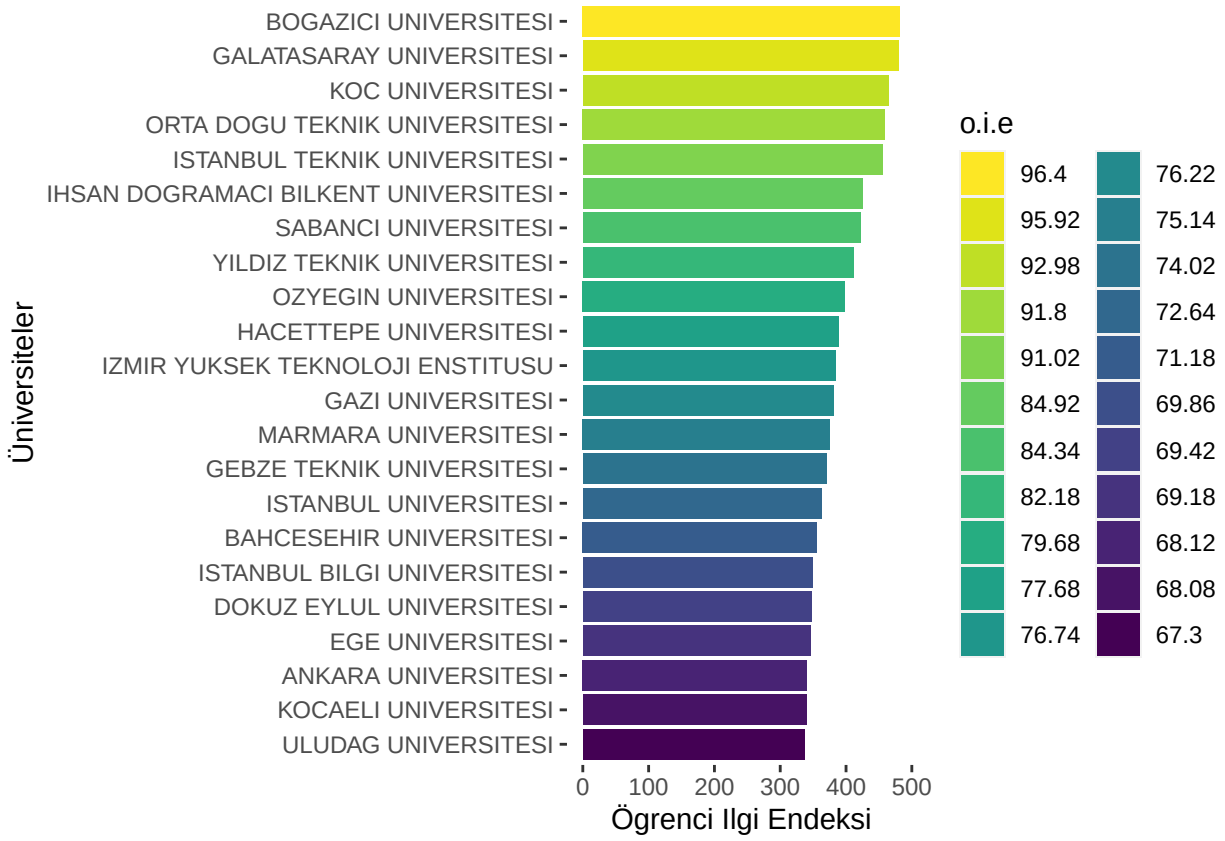
```
isveren_ilgi_uni <- read_excel("database/ilgi/isveren_ilgi_uni.xlsx")
colnames(isveren_ilgi_uni)<- c("Universiteler", "Isveren.Ilgi.Endeksi")
ilgi_uni<- rbind(ilgi_ankara, ilgi_bahcesehir, ilgi_bilgi, ilgi_bilkent, ilgi_bogazici, ilgi_dokuzeylul
colnames(ilgi_uni)<- c("Universiteler", "Ogrenci.Ilgi.Endeksi")
ilgi_uni<- merge(ilgi_uni, isveren_ilgi_uni, by='Universiteler')

ilgi_uni$Universiteler <- as.character(ilgi_uni$Universiteler)

ilgi_uni$Ogrenci.Ilgi.Endeksi <- as.numeric(ilgi_uni$Ogrenci.Ilgi.Endeksi)
ilgi_uni$Ogrenci.Ilgi.Endeksi <- round(ilgi_uni$Ogrenci.Ilgi.Endeksi, digits = 1)
ilgi_uni$o.i.e <- as.character(ilgi_uni[,2]/5)

ilgi_uni$Isveren.Ilgi.Endeksi <- as.numeric(ilgi_uni$Isveren.Ilgi.Endeksi)
ilgi_uni$Isveren.Ilgi.Endeksi <- round(ilgi_uni$Isveren.Ilgi.Endeksi, digits = 1)
ilgi_uni$i.i.e <- as.character(ilgi_uni[,3])
```

```
write_xlsx(ilgi_uni, "database\\ilgi\\ilgi_uni.xlsx")
```

##ÖĞRENCİ İLGİ SIRALAMASI

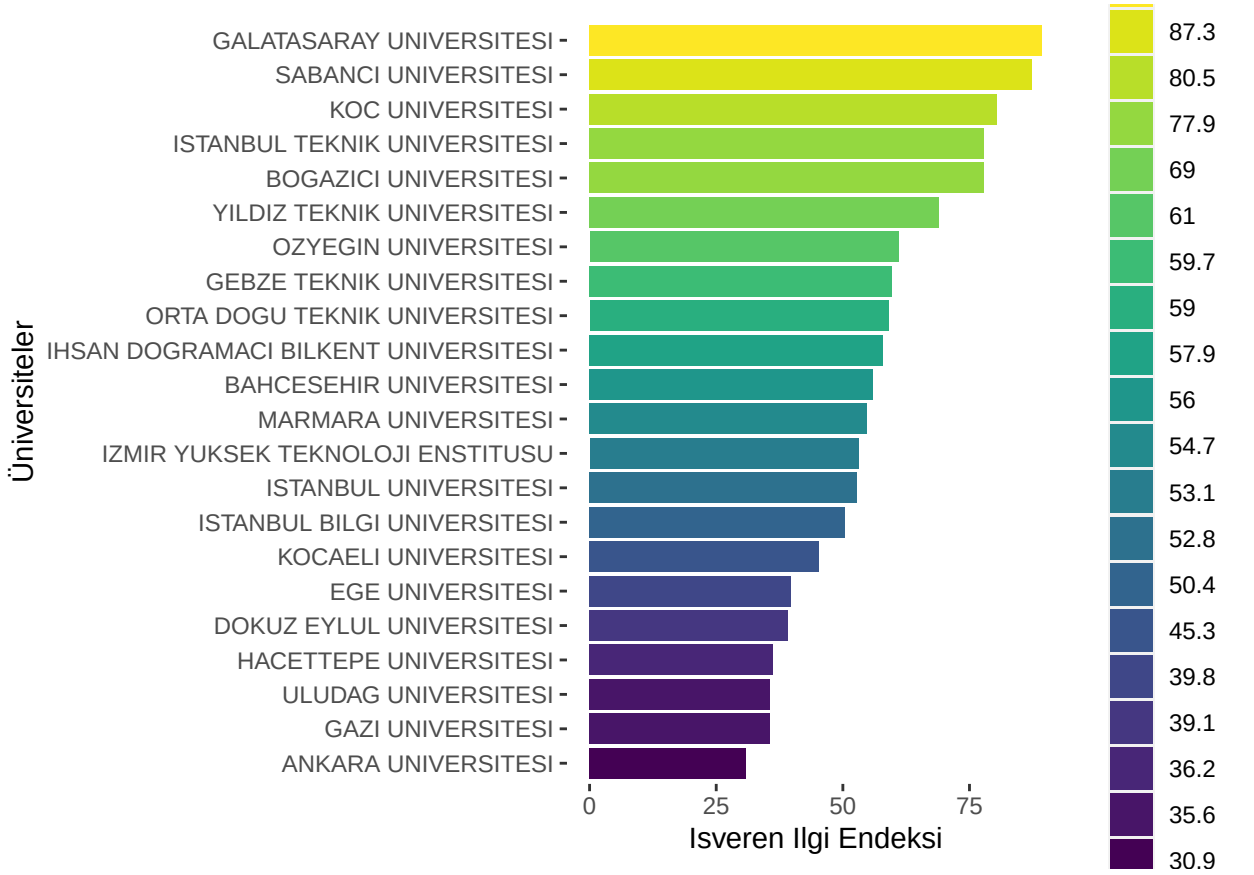
```
ilgi_uni %>%
  group_by(Universiteler) %>%
  ungroup() %>%
  ggplot(aes(x=Ogrenci.Ilgi.Endeksi, y=reorder(Universiteler, Ogrenci.Ilgi.Endeksi) ,fill=o.i.e)) +
  ylab("Üniversiteler") +
  xlab("Öğrenci İlgi Endeksi") +
  geom_col() +
```

```
  scale_fill_viridis_d() +
  guides(fill = guide_legend(reverse = TRUE) ) +
     theme(
        panel.grid = element_blank(),
        panel.background = element_blank())
```



##İŞVEREN İLGİ SIRALAMASI

```
ilgi_uni %>%
  group_by(Universiteler) %>%
  ungroup() %>%
  ggplot(aes(x=Isveren.Ilgi.Endeksi, y=reorder(Universiteler, Isveren.Ilgi.Endeksi) ,fill=i.i.e)) +
  ylab("Üniversiteler") +
  xlab("İşveren İlgi Endeksi") +
  geom_col() +
  scale_fill_viridis_d() +
  guides(fill = guide_legend(reverse = TRUE) ) +
     theme(
        panel.grid = element_blank(),
        panel.background = element_blank())
```




```
bilgisayar<- read_excel("database/bolum/bilgisayar.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
isveren_ilgi_bolum <- read_excel("database/ilgi/isveren_ilgi_bolum.xlsx")
bilgisayar<- bilgisayar[c(1:25),]
ogrenci_bilgisayar<- mean((bilgisayar$`En Düşük Puan`))
ilgi_bilgisayar<- c("BILGISAYAR MUHENDISLIGI", ogrenci_bilgisayar, isveren_ilgi_bolum[13,2])
```

```
ekonomi<- read_excel("database/bolum/ekonomi.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
ekonomi<- ekonomi[c(1:25),]
ogrenci_ekonomi<- mean((ekonomi$`En Düşük Puan`))
ilgi_ekonomi<- c("EKONOMI", ogrenci_ekonomi, isveren_ilgi_bolum[19,2])
```

```
elektronik<- read_excel("database/bolum/elektronik.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
elektronik<- elektronik[c(1:25),]
ogrenci_elektronik<- mean((elektronik$`En Düşük Puan`))
```

```
ilgi_elektronik<- c("ELEKTRIK ELEKTRONIK MUHENDISLIGI", ogrenci_elektronik, isveren_ilgi_bolum[26,2])
```

```
endustri<- read_excel("database/bolum/endustri.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
endustri<- endustri[c(1:25),]
ogrenci_endustri<- mean((endustri$`En Düşük Puan`))
ilgi_endustri<- c("ENDUSTRI MUHENDISLIGI", ogrenci_endustri, isveren_ilgi_bolum[9,2])
```

```
fizik<- read_excel("database/bolum/fizik.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
fizik<- fizik[c(1:25),]
ogrenci_fizik<- mean((fizik$`En Düşük Puan`))
ilgi_fizik<- c("FIZIK MUHENDISLIGI", ogrenci_fizik, isveren_ilgi_bolum[172,2])
```

```
hukuk<- read_excel("database/bolum/hukuk.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
hukuk<- hukuk[c(1:25),]
ogrenci_hukuk<- mean((hukuk$`En Düşük Puan`))
ilgi_hukuk<- c("HUKUK", ogrenci_hukuk, isveren_ilgi_bolum[221,2])
```

```
insaat<- read_excel("database/bolum/insaat.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
insaat<- insaat[c(1:25),]
ogrenci_insaat<- mean((insaat$`En Düşük Puan`))
ilgi_insaat<- c("INSAAT MUHENDISLIGI", ogrenci_insaat, isveren_ilgi_bolum[205,2])
```

```
isletme<- read_excel("database/bolum/isletme.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
isletme<- isletme[c(1:25),]
ogrenci_isletme<- mean((isletme$`En Düşük Puan`))
ilgi_isletme<- c("ISLETME", ogrenci_isletme, isveren_ilgi_bolum[24,2])
```

```
kimya<- read_excel("database/bolum/kimya.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
kimya<- kimya[c(1:25),]
ogrenci_kimya<- mean((kimya$`En Düşük Puan`))
ilgi_kimya<- c("KIMYA", ogrenci_kimya, isveren_ilgi_bolum[118,2])
```

```
kimyamuh<- read_excel("database/bolum/kimyamuh.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
kimyamuh<- kimyamuh[c(1:25),]
ogrenci_kimyamuh<- mean((kimyamuh$`En Düşük Puan`))
ilgi_kimyamuh<- c("KIMYA MUHENDISLIGI", ogrenci_kimyamuh, isveren_ilgi_bolum[32,2])
```

```
makine<- read_excel("database/bolum/makine.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
makine<- makine[c(1:25),]
ogrenci_makine<- mean((makine$`En Düşük Puan`))
ilgi_makine<- c("MAKINE MUHENDISLIGI", ogrenci_makine, isveren_ilgi_bolum[66,2])
```

```
matematik<- read_excel("database/bolum/matematik.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
matematik<- matematik[c(1:25),]
ogrenci_matematik<- mean((matematik$`En Düşük Puan`))
ilgi_matematik<- c("MATEMATIK", ogrenci_matematik, isveren_ilgi_bolum[213,2])
```

```
mbg<- read_excel("database/bolum/mbg.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
mbg<- mbg[c(1:25),]
ogrenci_mbg<- mean((mbg$`En Düşük Puan`))
ilgi_mbg<- c("MOLEKULER BIYOLOJI VE GENETIK", ogrenci_mbg, isveren_ilgi_bolum[246,2])
```

```
mimarlik<- read_excel("database/bolum/mimarlik.xlsx")
```

```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
mimarlik<- mimarlik[c(1:25),]
ogrenci_mimarlik<- mean((mimarlik$`En Düşük Puan`))
ilgi_mimarlik<- c("MIMARLIK", ogrenci_mimarlik, isveren_ilgi_bolum[173,2])
```

```
psikoloji<- read_excel("database/bolum/psikoloji.xlsx")
```

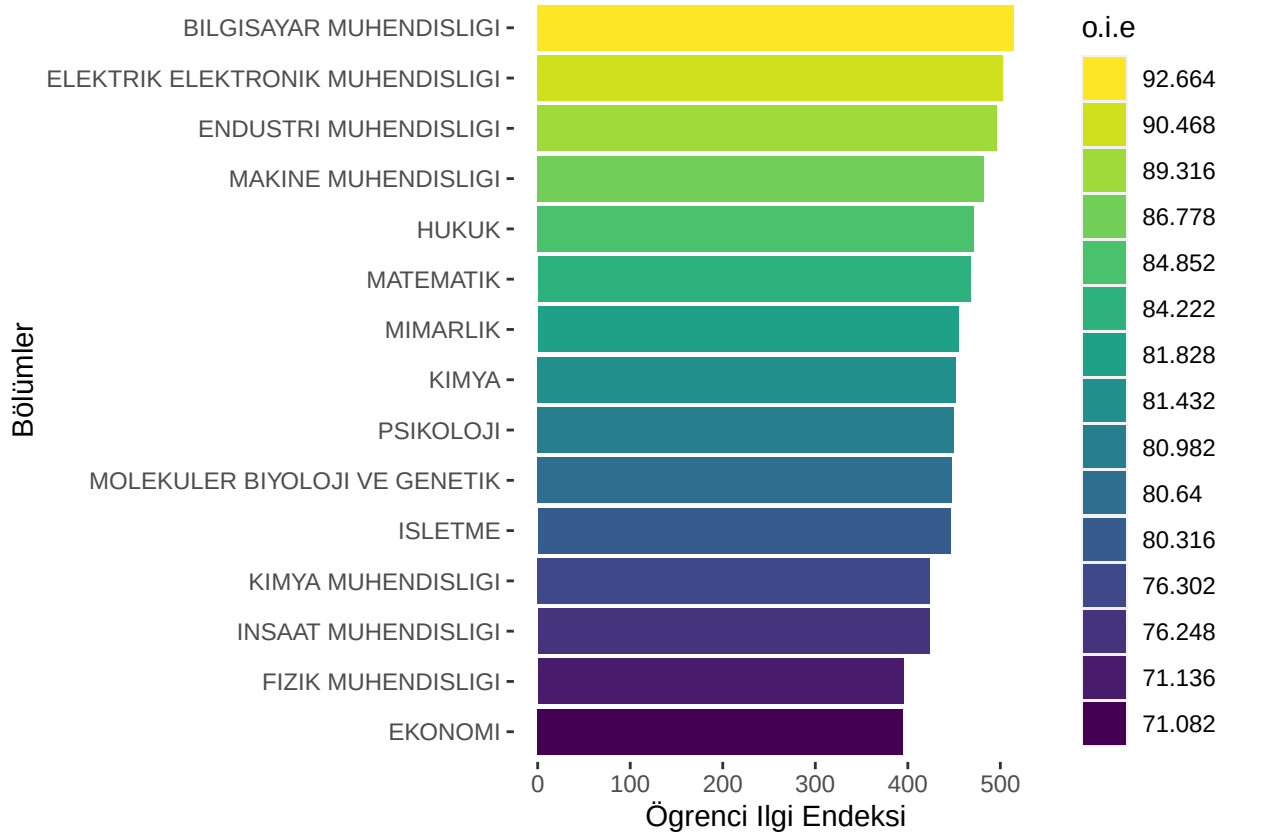
```
## New names:
## * `` -> ...8
## * `` -> ...13
```

```
psikoloji<- psikoloji[c(1:25),]
ogrenci_psikoloji<- mean((psikoloji$`En Düşük Puan`))
ilgi_psikoloji<- c("PSIKOLOJI", ogrenci_psikoloji, isveren_ilgi_bolum[220,2])
```

```
ilgi_bolum <- c( ilgi_bilgisayar, ilgi_elektronik, ilgi_endustri,  ilgi_makine, ilgi_hukuk, ilgi_matema
ilgi_bolum<-matrix(ilgi_bolum, nrow=15, byrow=TRUE)
colnames(ilgi_bolum)<- c("Bolumler","Ogrenci.Ilgi.Endeksi","Isveren.Ilgi.Endeksi")
ilgi_bolum <- data.frame(ilgi_bolum)

ilgi_bolum$Bolumler <- as.character(ilgi_bolum$Bolumler)

ilgi_bolum$Ogrenci.Ilgi.Endeksi <- as.numeric(ilgi_bolum$Ogrenci.Ilgi.Endeksi)
ilgi_bolum$Ogrenci.Ilgi.Endeksi <- round(ilgi_bolum$Ogrenci.Ilgi.Endeksi, digits = 1)
ilgi_bolum$o.i.e <- as.character(ilgi_bolum[,2]*9/50)

ilgi_bolum$Isveren.Ilgi.Endeksi <- as.numeric(ilgi_bolum$Isveren.Ilgi.Endeksi)
ilgi_bolum$Isveren.Ilgi.Endeksi <- round(ilgi_bolum$Isveren.Ilgi.Endeksi, digits = 1)
ilgi_bolum$i.i.e <- as.character(ilgi_bolum[,3])
```

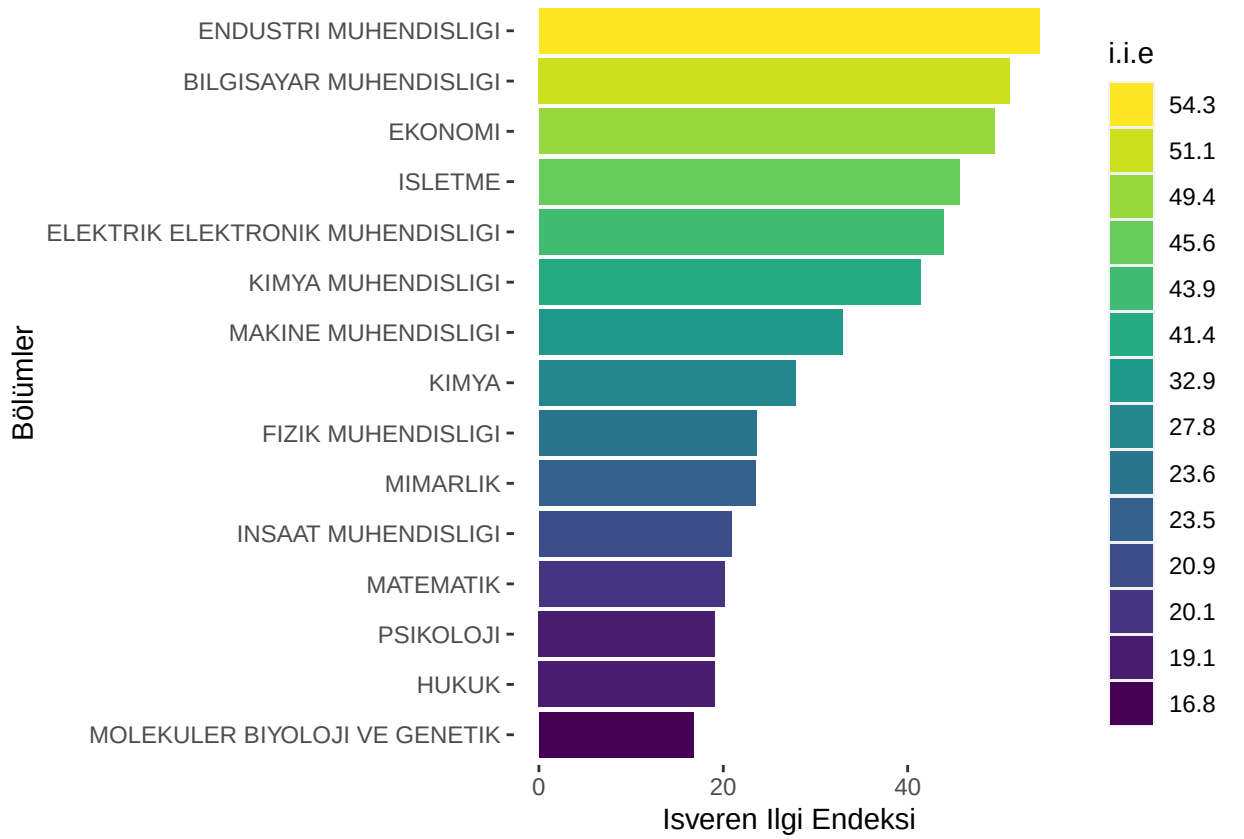
##ÖĞRENCİ İLGİ SIRALAMASI

```
ilgi_bolum %>%
  group_by(Bolumler) %>%
  ungroup() %>%
  ggplot(aes(x=Ogrenci.Ilgi.Endeksi, y=reorder(Bolumler, Ogrenci.Ilgi.Endeksi) ,fill=o.i.e)) +
  ylab("Bölümler") +
  xlab("Öğrenci İlgi Endeksi") +
  geom_col() +
  scale_fill_viridis_d() +
  guides(fill = guide_legend(reverse = TRUE) ) +
     theme(
        panel.grid = element_blank(),
        panel.background = element_blank())
```



##İŞVEREN İLGİ SIRALAMASI

```
ilgi_bolum %>%
  group_by(Bolumler) %>%
  ungroup() %>%
  ggplot(aes(x=Isveren.Ilgi.Endeksi, y=reorder(Bolumler, Isveren.Ilgi.Endeksi) ,fill=i.i.e)) +
  ylab("Bölümler") +
  xlab("İşveren İlgi Endeksi") +
  geom_col() +
  scale_fill_viridis_d() +
  guides(fill = guide_legend(reverse = TRUE) ) +
   theme(
        panel.grid = element_blank(),
        panel.background = element_blank())
```




```
write_xlsx(ilgi_bolum, "database\\ilgi\\ilgi_bolum.xlsx")
```