Veri Görselleştirme ve Grafik

Kemal Şahin

Nereden çıktı bu veri görselleştirme?



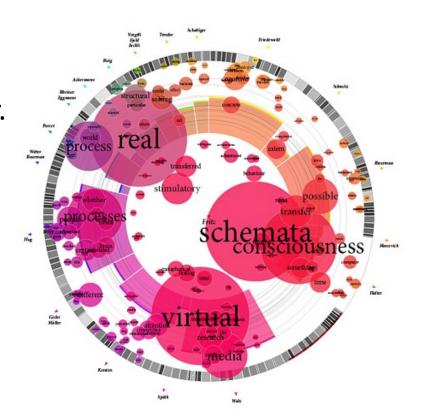


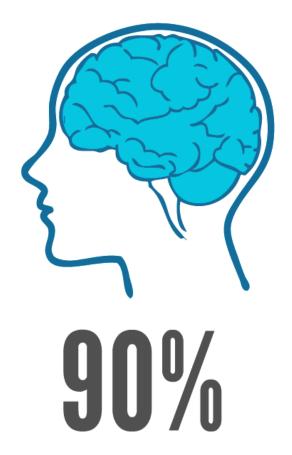
Geldiğimiz nokta...

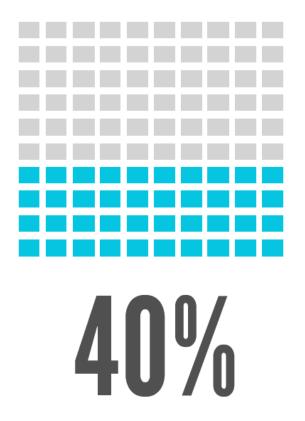


Veri Görselleştirmenin Temeli

- Analiz ve ilişkilendirme (Analyzing and engaging)
- Görsel düşünmeye yatkınlık (Visual processing)
- Veri görselleştirme bir bilim dalıdır.
 Farklı disiplinlerden beslenir.







Beyin algıladığı bilgileri görselleştiriyor.

İnsan düz metinden çok daha hızlı geri yanıt verebiliyor.

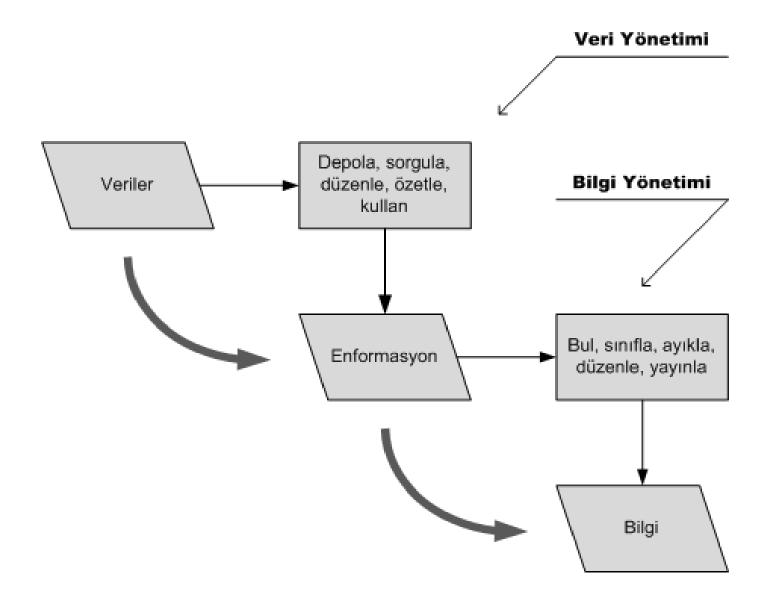
Nedir?

Verinin Bilgisayar destekli olarak etkileşimi yüksek görsel temsillerinin hazırlanmasıdır.

Veri (Anlamlı Veri)

- Kapsamlı
- Bağlamsal ve ilişkili
- Güvenilir
- Yapısal ve yapısal olmayan

Anlamlı veri derken...



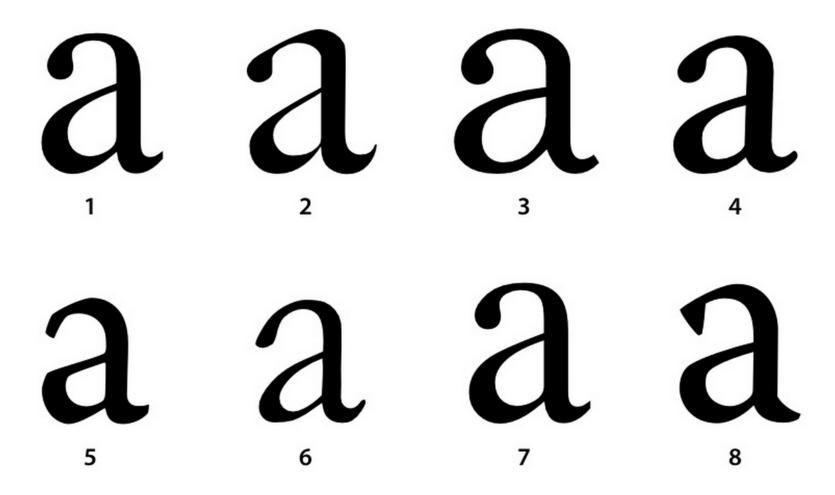
YARATICILIK (TASARIM) - Görsel Dil ise...

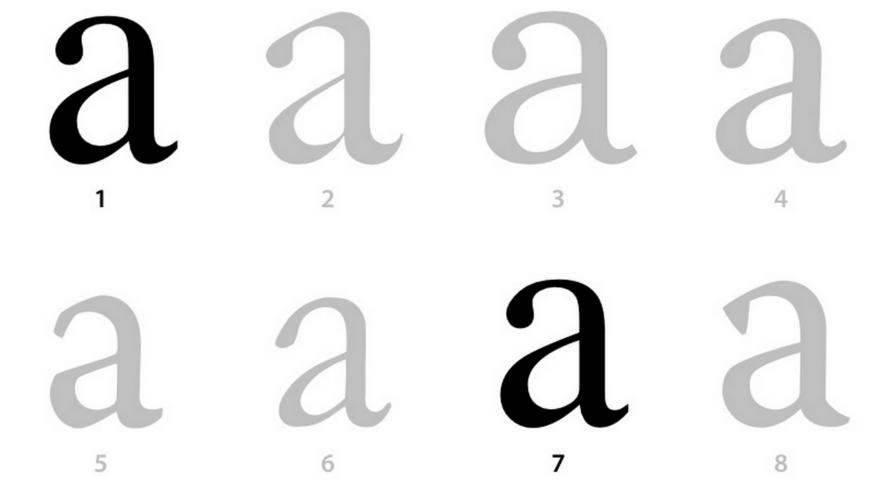
- Chart junking'den kaçınmalı!
- Veriye odaklanmalı
- Görsel düşünmeyi tetiklemeli
- Grafik dili seçkin ve özgün olmalı

ARAÇ

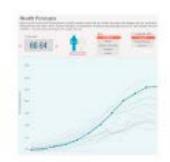
- Veriye etkileşim katabilmeli
- Gelişmiş görselleştirme opsiyonları sunabilmeli
- Gerçek zamanlı veriye ulaşıp kontrol edebilmeli

Hemen bir örnek yapalım...

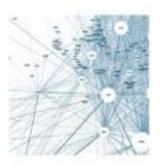




Veri Görselleştirme Türleri







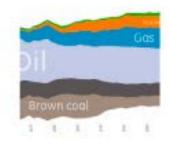


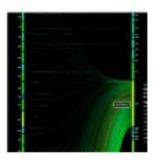
Chart
Quantities,

Map Geography Network Interconnections Time Series

- Chart (Çizelge Grafiği)
- Map (Haritalar)
- Network (Bağlantı gösterimi)
- Time Series (Zaman Çizelgeleri)

Veri Görselleştirme Türleri





Matrix



Hierarchy Tree Structure

Movement and Exchange

Flow

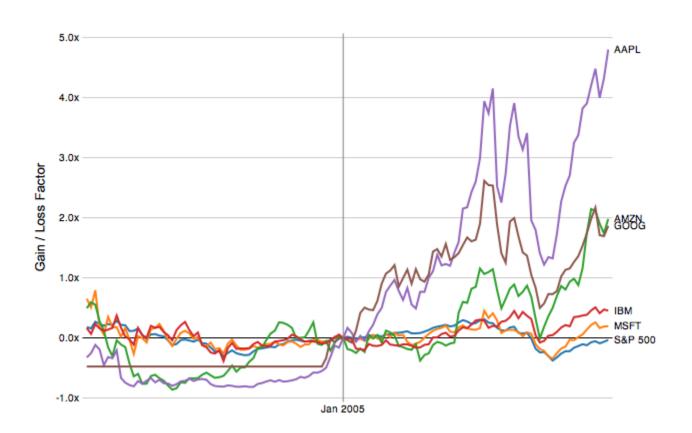
Matrix

Infographic

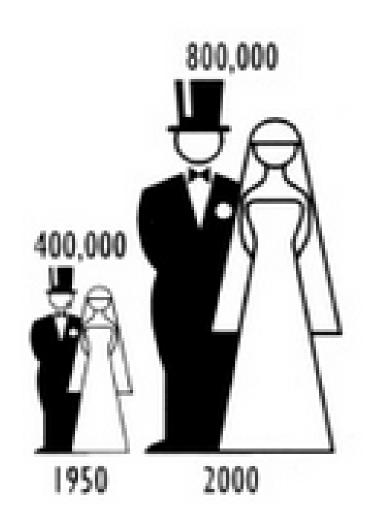
Explanation and Communication

- Hierarchy (Hiyerarşi)
- Flow Chart (Akış Diyagramları)
- Matrix (Çoklu İlişkisel ağ)
- Infographic (İnfografik)

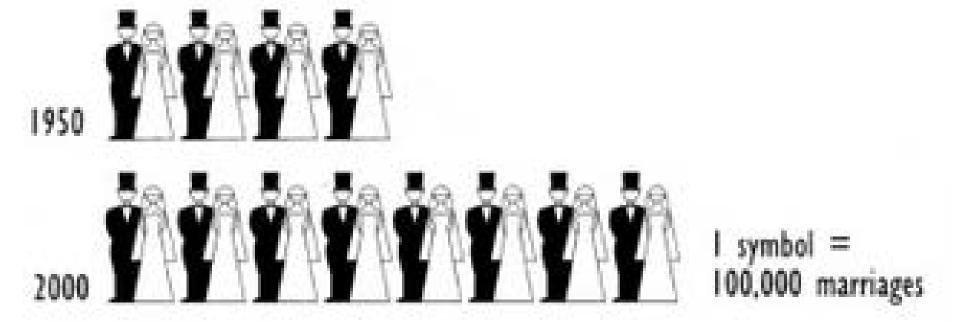
Chart (Çizelge Grafiği)



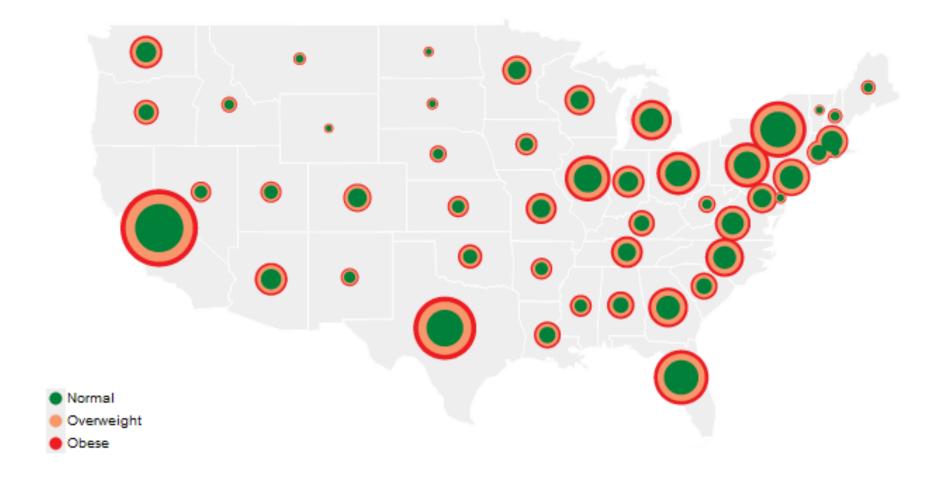
Tam bu noktada bir soru?



Ölçeklendirme yerine temsili simge!



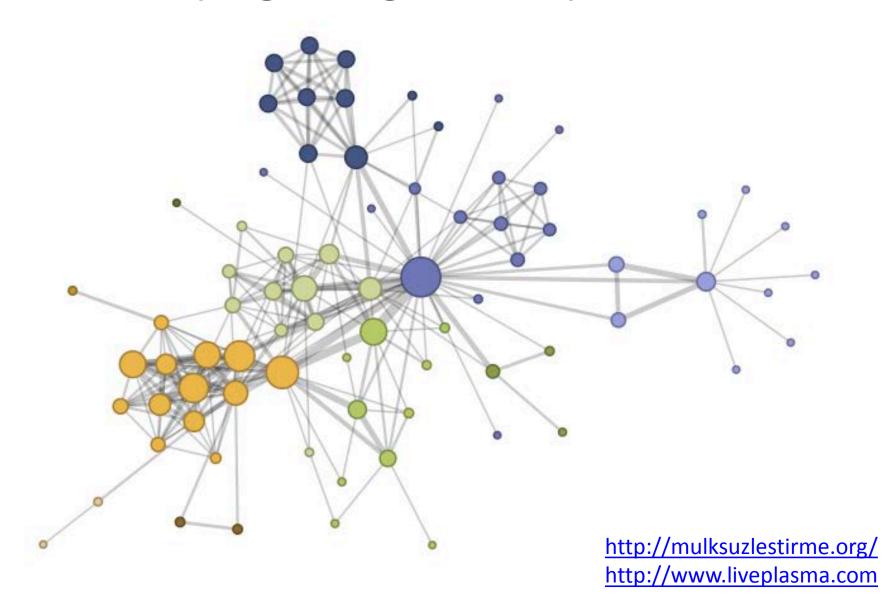
Map (Haritalar)



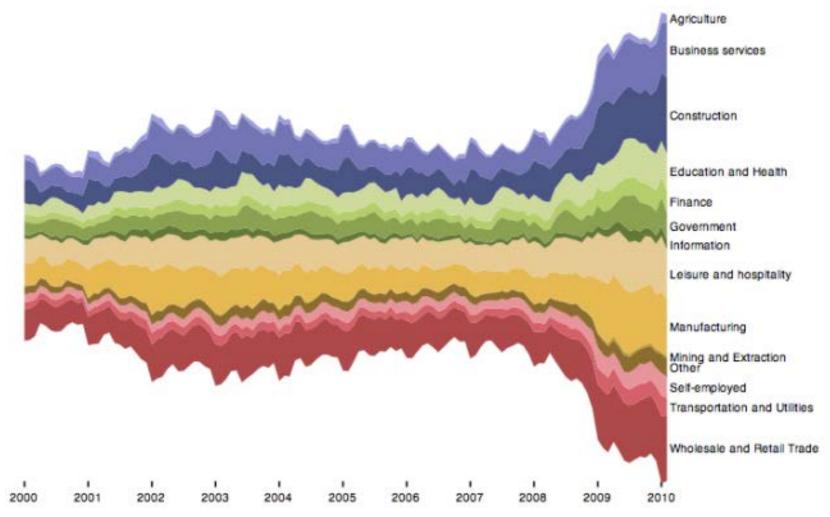
Map (Haritalar)



Network (Bağlantı gösterimi)

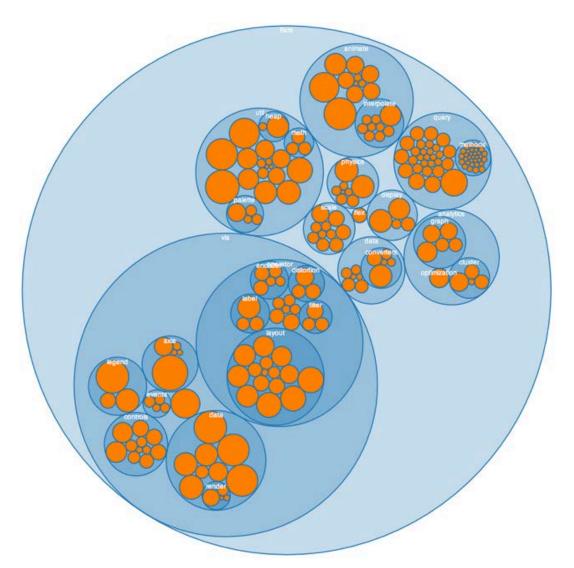


Time Series (Zaman Çizelgeleri)



http://visualizing.org/full-screen/56186 https://www.yearlightcalendar.com

Hierarchy (Hiyerarşi)

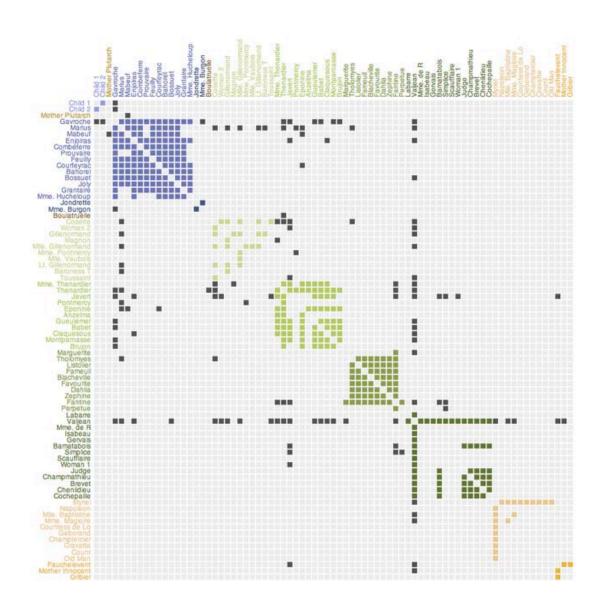


http://www.axiis.org/examples/BrowserMarketShare.html

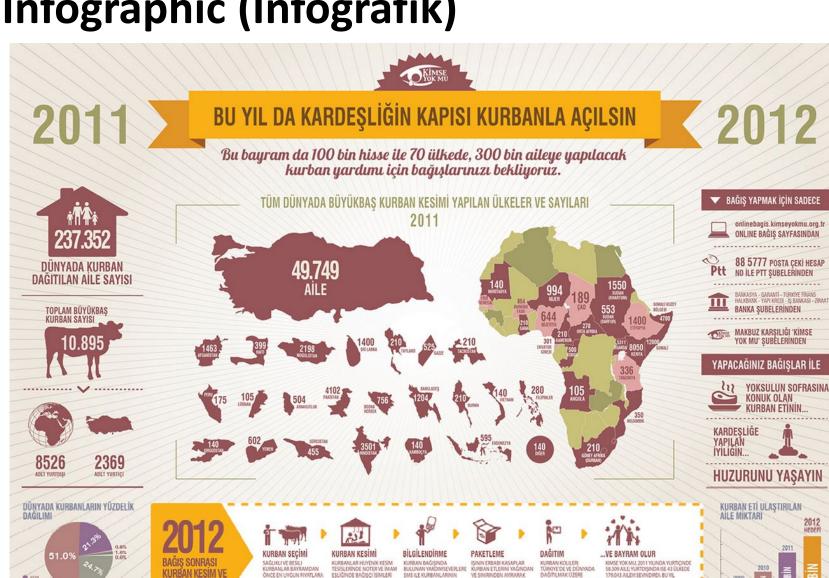
Flow Chart (Akış Diyagramları)



Matrix (Çoklu İlişkisel ağ)



Infographic (Infografik)



SMS ILE KURBANLARININ

VE SINIRINDEN AYIRARAK

PARCALARA AYIRIR ETLER

DAĞITILMAK ÜZERE

GÖNÜLLÜLER TARAFINDAN

179,043 AILEYI SEVINDIRDI. BU YIL

TURNIYE'DE EN AZ 70 BIN AILEYE

ÔNCE EN UYGUN FIYATLARA

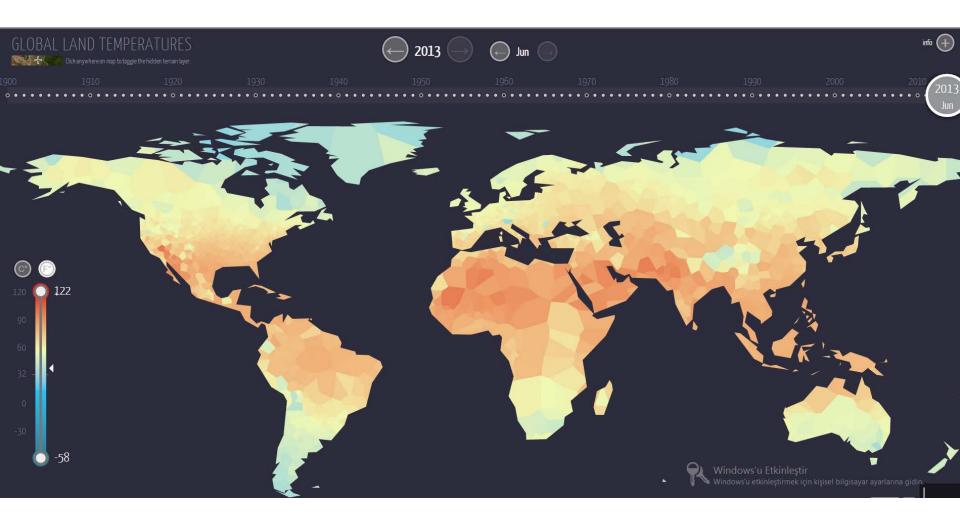
O ORTA VE GÜNEY AMERIKA O BALKANLAR VE ORTADOĞI

Nasıl Yapılıyor?

- Araştırma
- Beyin Fırtınası Değerlendirme
- Senaryo
- Tasarım
- Ölçme
- Yayınla!

Birkaç örnek...

1900'den Bu Yana Sıcaklık Değişimi



Avlanma

The Hunted

And the countries most exposed to hunting.

USING THIS MAP

This map shows how many terrestrial species categorised as endangered by the International Union for Conservation of Nature are threatened by hunting and where. It also includes species in the Data Deficient category; species that are relatively unobserved and so must too be protected.

The darker circles represent countries with more species with decreasing populations trends, indicating the impact hunting may be having, and the lack of successful conservation action in the region. The larger and darker the circle, the more exposed a country is to poaching and hunting.

Use the buttons at the top to toggle between different class of animals and view their threat.

ABOUT

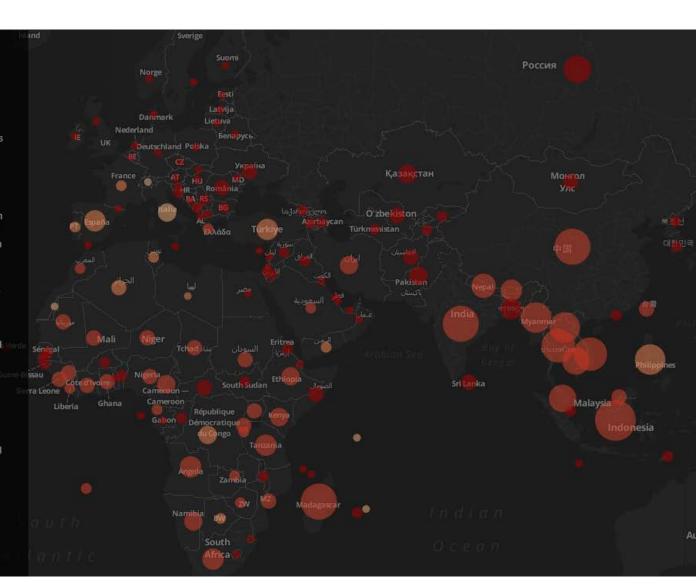
Hunting is classified by IUCN as: "killing or trapping terrestrial wild animals for commercial, recreation, subsistence, research or cultural purposes, or for control/persecution reasons, including accidental mortality/bycatch."

The aim is to provide a visual aid for the size of the poaching threat that each country faces and so require extra conservation efforts and law making, therefore some species are duplicated due to the fact their native range covers several countries.

Further information and my analysis can be found here.

SOURCES

The information is gathered from the IUCN Red List, a database of species, their categorisation, population trends, and threats. The dataset can be viewed here.

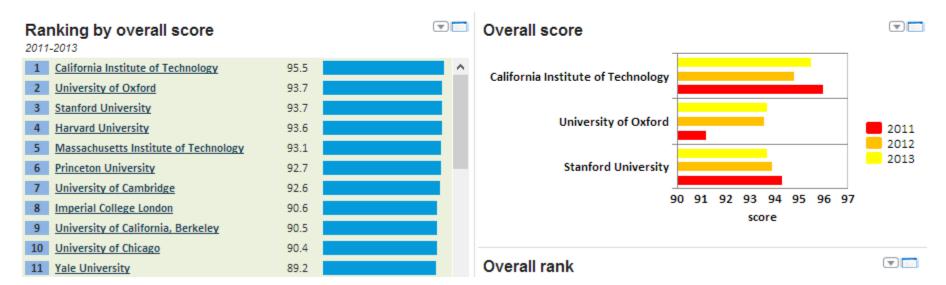


Top 200 Üniversite



The most notable changes that occured during the last studying year (2012-2013) are Harvard University's fall from second to fourth place and the University of Oxford's move into second. Meanwhile, the California Institute of Technology has consolidated as the world number one keeping leading position for the second year at a run. One more remarkable tendency over the 2012-2013 years is the rise of Asian universities. So, institutions of China, Republic of Korea, Taiwan, Singapore have made their best, moving on the top positions.

Source: World University Rankings, 2011-2013



Web Tabanlı Araçlar (Tipografik Araçlar)

- http://www.wordle.net
- http://www.tagxedo.com
- http://tagul.com/
- http://worditout.com
- http://www.wordsift.com



Twitter Görselleştirme

- http://mentionmapp.com/
- http://www.tweetails.com
- http://www.twitonomy.com
- http://asterisq.com



İnfografik Hazırlama Araçları

- http://infogr.am
- http://visual.ly
- http://piktochart.com

İnfografik Hazırlama Araçları

http://www.xtimeline.com/index.aspx