

ECPR Methods Summer School: Automated Collection of Web and Social Data

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`www.netdem.org`

Course website:

github.com/pablobarbera/ECPR-SC103

Scraping the web

Scraping the web: what? why?

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- ▶ Speeches, sentences, biographical information...

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Web scraping is the process of extracting this information automatically and transforming it into a **structured dataset**.

Scraping the web: two approaches

Two different approaches:

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 - ▶ `httr` package to construct API requests
 - ▶ Packages specific to each API: `weatherData`, `WDI`, `Rfacebook`... Check CRAN Task View on [Web Technologies and Services](#) for more examples

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 - ▶ Are there any rate limits?
 - ▶ Can you share the data?

The art of web scraping

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1. Learn about structure of website
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3. Generalize: functions, loops, debugging
4. Data cleaning

Three main scenarios

1. Data in table format



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International court


From Wikipedia, the free encyclopedia

List of international courts [\[edit \]](#)


Name	Scope	Years active	Subject matter
International Court of Justice	Global	1945–present	General disputes
International Criminal Court	Global	2002–present	Criminal prosecutions
Permanent Court of International Justice	Global	1922–1946	General disputes
Appellate Body	Global	1995–present	Trade disputes within the WTO
International Tribunal for the Law of the Sea	Global	1994–present	Maritime disputes
African Court of Justice	Africa	2009–present	Interpretation of AU treaties
African Court on Human and Peoples' Rights	Africa	2006–present	Human rights
COMESA Court of Justice	Africa	1998–present	Trade disputes within COMESA
ECOWAS Community Court of Justice	Africa	1996–present	Interpretation of ECOWAS treaties
East African Court of Justice	Africa	2001–present	Interpretation of EAC treaties
SADC Tribunal	Africa	2005–2012	Interpretation of SADC treaties

Three main scenarios

2. Data in unstructured format




India English Register for updates 11,072,800 Visitors

 I PAID A BRIBE I DID NOT PAY A BRIBE I MET AN HONEST OFFICER BRIBE HOTLINE ALL REPORTS NEWS **REPORT A BRIBE**

All Reports > I Paid A Bribe

ALL / **I PAID A BRIBE** / BRIBE FIGHTER / HONEST OFFICER / BRIBE HOTLINE


 1 day ago 76 views


POLICE NILO GHUSS (bribe)

Passport | Police Verification for Passport | Paid INR 5,000

Reported on January 17, 2016 from Bankura, West Bengal | Report #89544

What will happen to this country..police mamu's govt income: 30,000 per month. Per day GHUSS income 5000 (per passport verification). Imagine they t...[Read more](#)

 [How to Get a Passport Verified in Ghaziabad](#)


 1 day ago 104 views


Corruption due to vague rules

Police | Traffic Violations | Paid INR 500

Reported on January 16, 2016 from Mumbai, Maharashtra | Report #89509

At Chembur near Eastern Expressway traffic cop stopped me and started checking docs..all was fine buy cup expired..then he pointed out film.. He took...[Read more](#)

 [Things to Know on Traffic Offences and Respective Penalties](#)

 2 days ago 105 views

Bribe collected by Staff of Enrollment agency

Municipal Services | Aadhaar or UID Related | Paid INR 120

Reported on January 16, 2016 from Mysore, Karnataka | Report #89467

UIDAI has to take a stand on fees to be paid to enrolment agencies for processing Aadhaar

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Department
All departments


Bribe Amount
All Amount


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Manik Tanega, a sports enthusiast, wrote against a custom officer on ipaidabribe.com, for cough up a hefty bribe by a Customs official at Bengaluru airport.

SEE HIS STORY

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 Report your Bribe Story!

 See action taken.

www.ipaidabribe.com/reports/paid

Three main scenarios

3. Data hidden behind web forms

The screenshot shows the 'MONITOR LEGISLATIVO' website interface. At the top, there is a navigation bar with icons for home, user profile, news, candidates, national assembly, abuses, and contact. Below this is a search bar with the text 'RESULTADOS DE LA CONSULTA'. A dropdown menu is open, showing 'Seleccione' and 'Partido' options, with a 'BUSCAR' button. Below the search bar, a purple banner reads 'DIPUTADOS ENCONTRADOS'. Underneath, there are six candidate portraits, each with a 'Unidad' logo and a name. The candidates are: Julio Ygarza (Estado: Amazonas), Mauligmer Baloa (Estado: Amazonas), Nirma Guarulla (Estado: Amazonas), José Brito (Estado: Anzoátegui), Chaim Bucarán (Estado: Anzoátegui), and Richard Arteaga (Estado: Anzoátegui). Below the portraits, there are two more partial portraits.

MONITOR LEGISLATIVO

INICIO | PERFIL IDEAL | NOTICIAS | CANDIDATOS | ASAMBLEA NACIONAL | ABUSOS | CONTACTENOS

RESULTADOS DE LA CONSULTA

Seleccione | Partido | BUSCAR

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Candidates on 2015 Venezuelan parliamentary election

Three main scenarios

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2. Data in **unstructured** format
 - ▶ Element identification with `selectorGadget`
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3. Data hidden **behind web forms**
 - ▶ Automation of web browser behavior with `selenium`