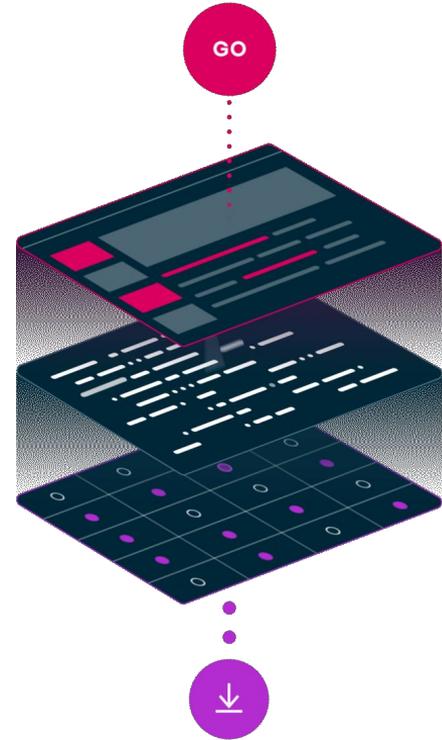




# Enterprise-grade Scraping with AI

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# Speakers



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## Iain Lennon

Chief Product Officer at Zyte



## Adrian Chaves

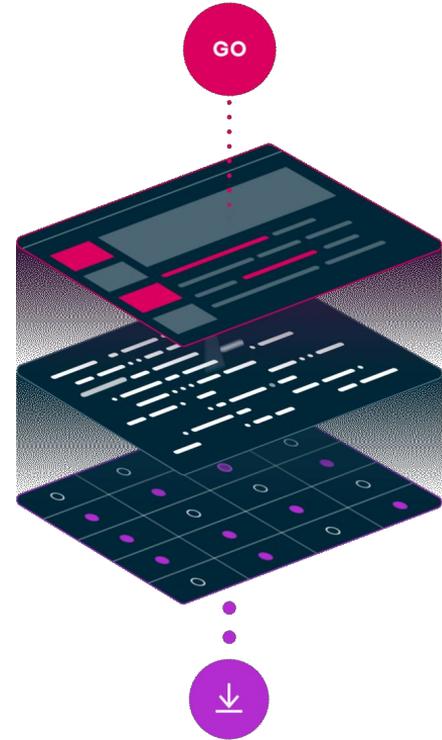
Python Developer at Zyte



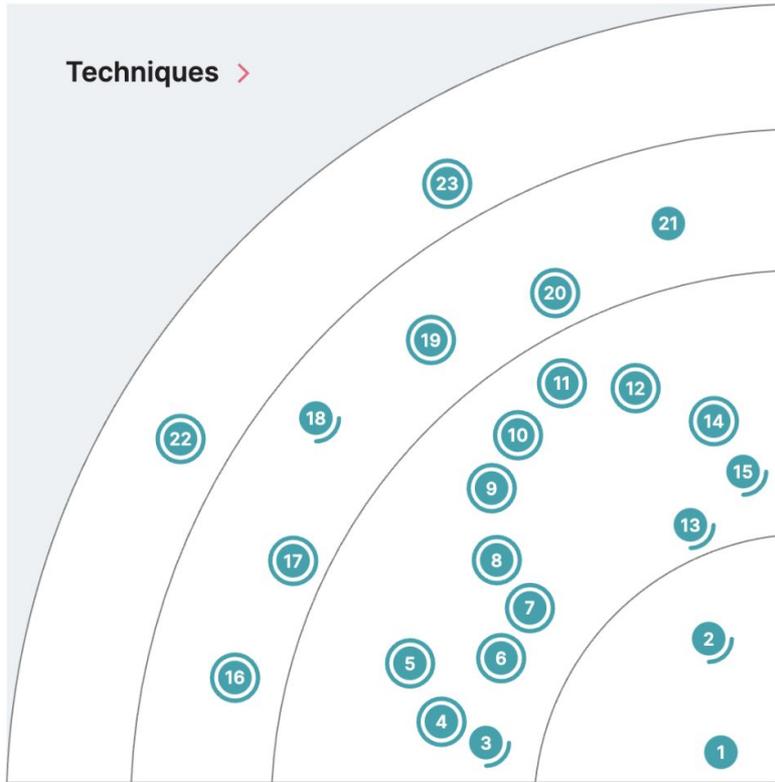


# Enterprise-grade Scraping with AI

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## Techniques >



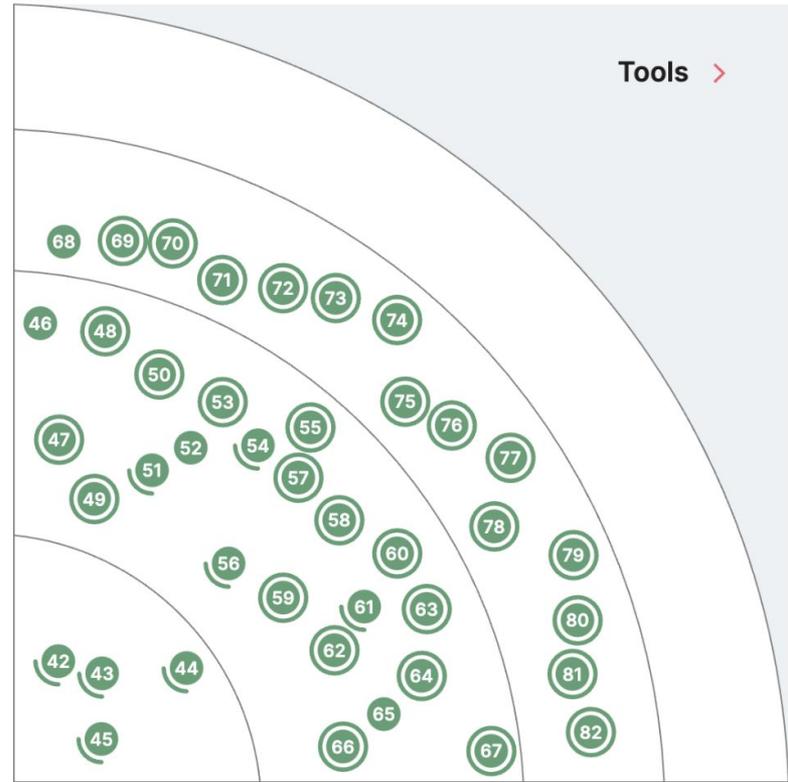
Hold

Assess

Trial

Adopt

## Tools >



Adopt

Trial

Assess

Hold

# The two major problem spaces of web scraping

The cat-and-mouse  
contest with bans



Web scraping APIs

The scalability problem  
of set-up & maintenance



Low/No Code?  
Crowdsourcing?

**AI? LLMs?**



# Practical testing with LLMs for scraping

## **Fast & flexible set-up**

Rapidly extract data points without need for model training

## **Great for unstructured text**

Extraction of discrete terms from unstructured descriptive fields

## **Data processing**

UOM conversions, cleansing etc

## **Orchestration**

Inc understanding and clarifying requirements

## **Training data**

Rapid and flexible source for ML

# Practical testing with LLMs for scraping

## **Immature for scraping**

No robust solutions yet. Developer experience largely undefined

## **Reliability challenges**

Hallucinations; unclear strategies to fix errors & control quality

## **High Costs**

Use on every request is uneconomic

## **Incomplete**

Needs integrations for bans, rendering

## **Legal Concerns**

On training data, copyright



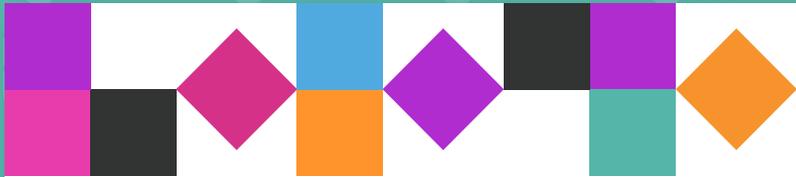
What do we need to solve the scaling problem?

An automated solution for  
**instant set-ups**, that **addresses maintenance**

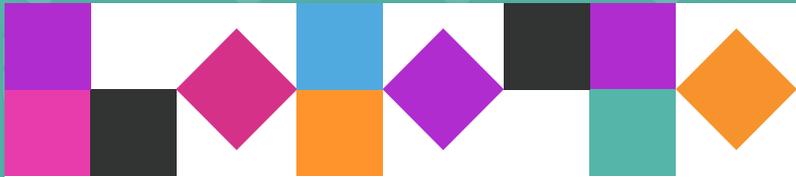
which is

**accurate**, **cost effective**, **compliant**,  
**complete** and **controllable**

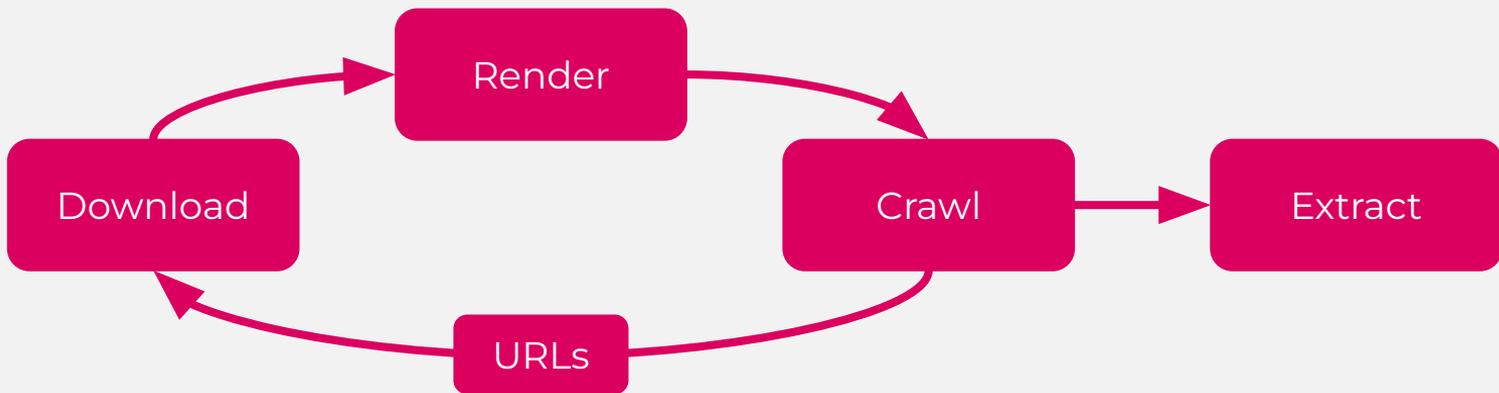
We'd like to show you this today

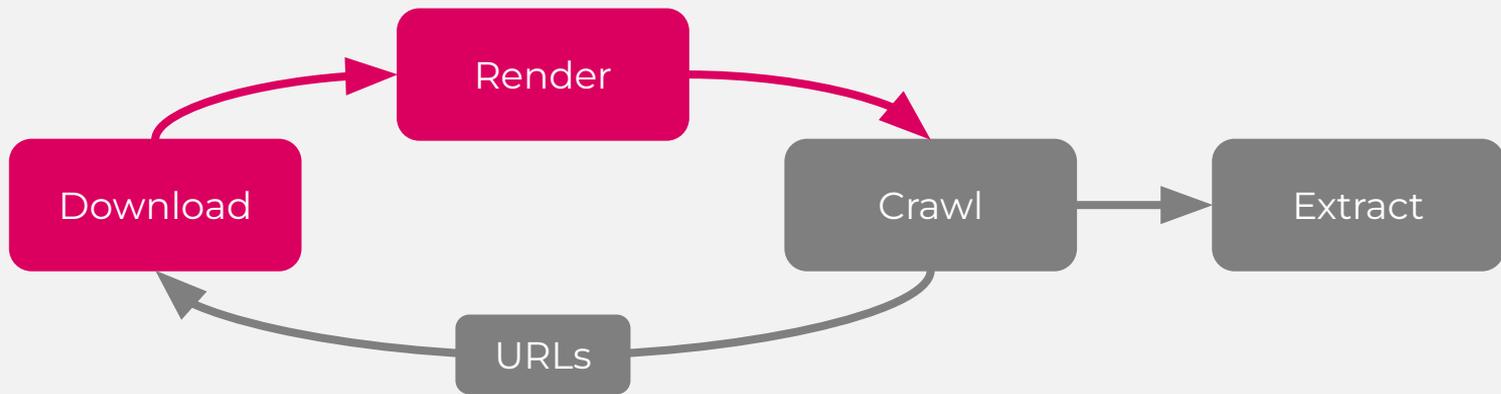


Demo



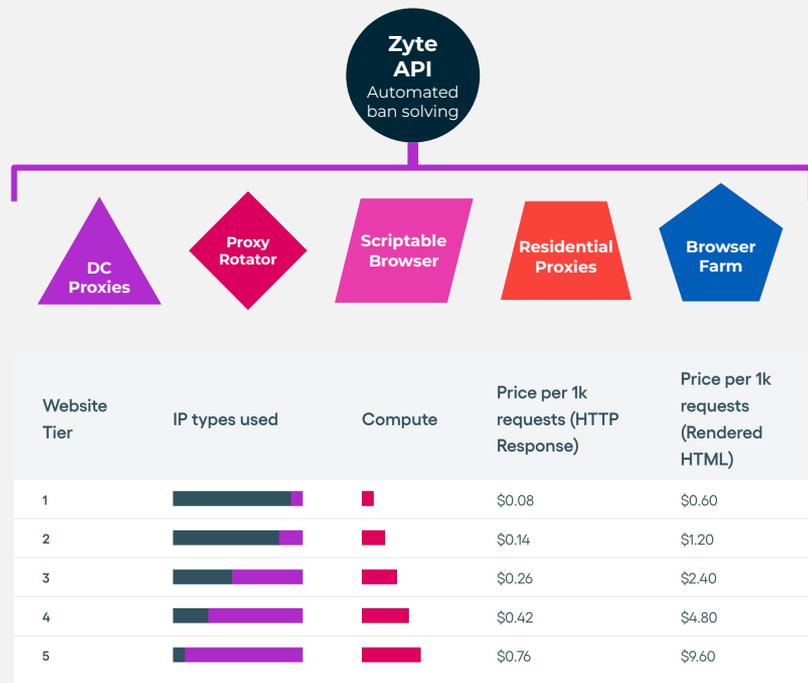
What's under the hood?

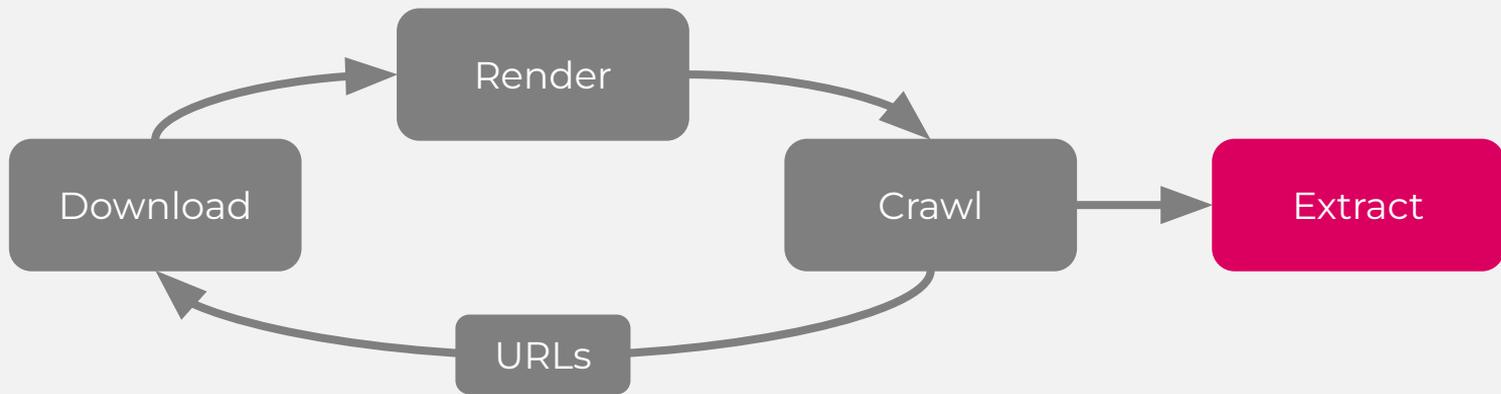




# Zyte API - Solving Bans

- Auto-applies tech required to solve bans of **all complexities**
- Proxyway: strongest **success**, **fastest** and **best cost** in market
- Priced in 5 tiers - competitive against all tools inc DC proxies





# Zyte API - Automatic Extraction

- Supervised ML models developed for web scraping
- Mature and patented technology
- **Instant set-up** for any product site. Articles and Jobs next
- Runs on every page - self-healing to **address maintenance**

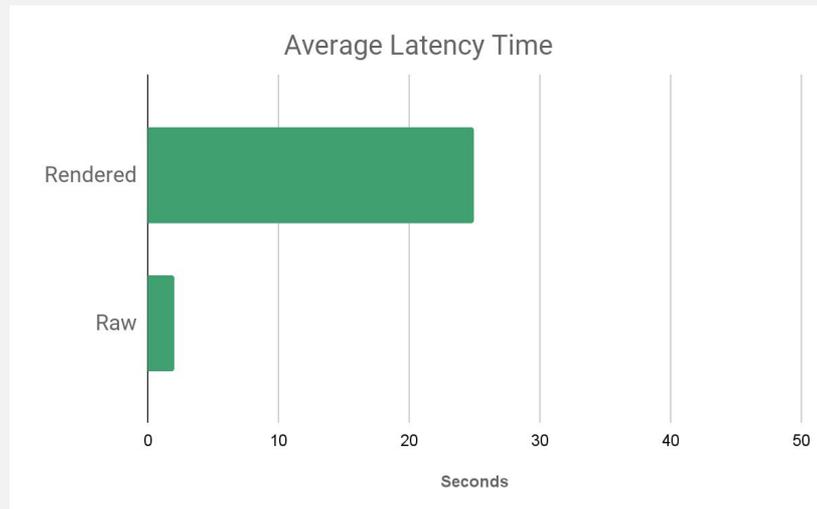
The screenshot shows a product page for a 'Power Bank - Portable Charger-Worx-Swissten'. The following data points are highlighted with green dashed boxes:

- Product Title: Power Bank - Portable Charger-Worx-Swissten
- SKU: 22013950
- SKU: sku: 1.00 (+0.65)
- Capacity: 5000 mAh
- Price: £11.50 (Tax included)

Other visible elements include social media icons (Facebook, Pinterest, Twitter, Email) and three capacity selection buttons: 20000 mAh, 10000 mAh, and 5000 mAh (the latter is highlighted with an orange border).

# Highly cost effective

- Zyte API extraction is around **50 times cheaper** than ChatGPT 3.5
- Dual-mode HTML support –
  - Raw HTML (HttpResponse) for best speed and cost
  - Rendered HTML for Javascript-heavy sites etc



# Quality : LLMs versus Supervised ML

- For fields expressed in page structure **supervised ML is more accurate**
- We use LLMs for field extraction from **unstructured** text

	Chat GPT 3.5	Zyte API
Price	0.84	<b>0.95</b>
Currency	0.89	<b>0.96</b>
SKU	0.43	<b>0.87</b>
MPN	0.11	<b>0.79</b>

# Human-in-the-loop AI for fast Quality support

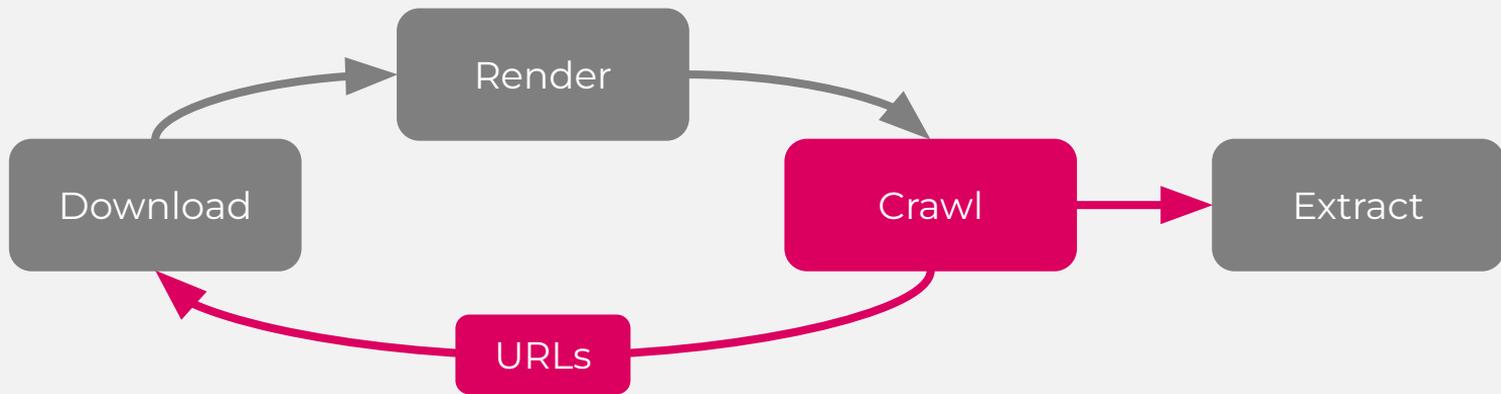
- Our Support teams make site-specific corrections for ML where needed
- If sites have an issue, 80% are resolved with this
- Fixes deployed **same-day**



# Schemas support out-of-box compliance

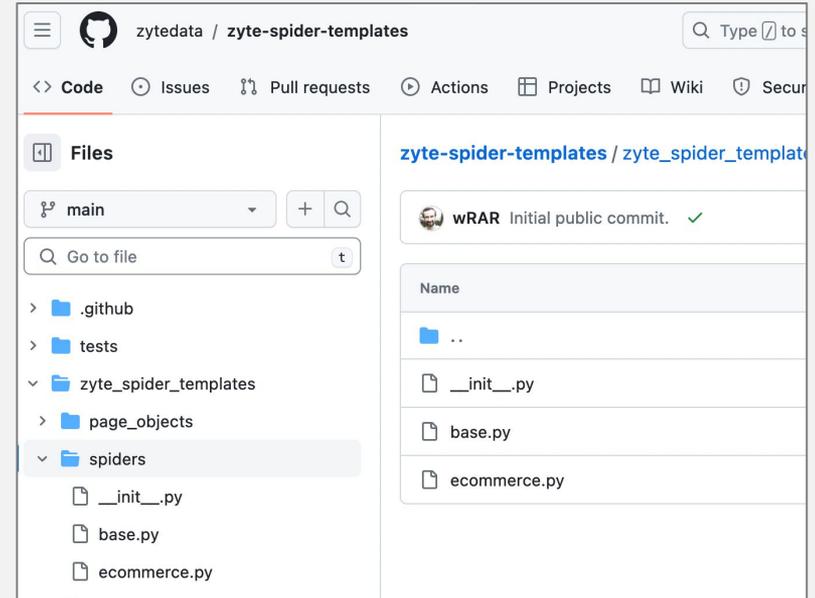
- Extraction to defined schemas - easily combine data across sites
- These **exclude fields** containing PII and copyrighted content for compliance confidence

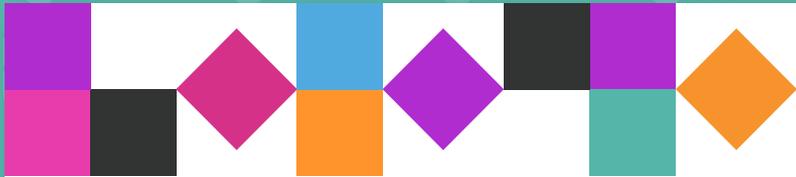
availability	string Enum: "InStock" "OutOfStock" The availability status for the product.
color	string The color of the product.
currency	string The currency associated with the price, in ISO 4217 standard (e.g. USD).
currencyRaw	string The currency associated with the price, as appears on the page (no post-processing).
productId	string Product identifier, unique across dataset. It may come in the form of an SKU, any other identifier, a hash or even a URL. Unique across dataset.
gtin	Array of objects [items] List of standardized GTIN product identifiers associated with the product, which are unique for the product across different sellers.
Array [	
type	string



# Controlled with open-source Scrapy templates

- Open-source spiders calling Zyte API for bans & extraction
- Adjust crawling or override extraction for **complete control**
- Scrapy is largest and most widely supported scraping framework





Demo

# We eat our own dog food

- Zyte's services arm have been using pre-release versions of this solution
- Seeing **50-80%** reduction in set-up, slashed maintenance
- Why not 100%? Data QA, custom fields. This **automates the standard.**
- Unlocking new types of opportunity

 Zyte Data

## Managed data extraction

Drive business insights without worrying about the complexities of data extraction. Zyte's best-in-class legal team and large data delivery team have you covered.

Get data delivered

# Production ready AI solution to scalability

## Instant set-up

For any product site,  
articles & jobs next

## Save Maintenance

Models run on every  
request - self-healing

## Cost effective

50x cheaper than  
ChatGPT 3.5

## High Quality

Dedicated scraping  
models, supported

## Compliant

Schemas exclude PII &  
copyrighted fields

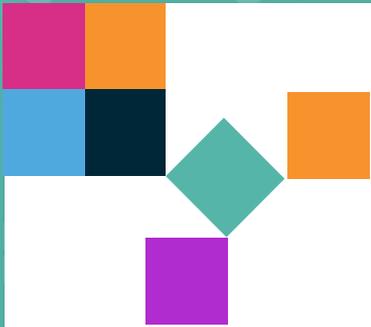
## Complete

Powerful ban solving  
for complete solution

## Control

Tune to precise needs  
with Scrapy

Please, try this yourself  
We'd like to give you first access



Thank you