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arXiv Bulk Data Access

We believe that *open access* should permit computation on collections of articles as well as human access to individual articles, and that the results of such computation will include better tools to find, browse, use and assess articles. There are, however, practical and financial constraints on the services we are able to offer for the arXiv collection. We must balance the desire to promote research and development based on the arXiv collection against these constraints. Access mechanisms provided are grouped into metadata and full-text services below.

Please review the Terms of Use for arXiv APIs before using any of the access options below.

Bulk Metadata Access

OAI-PMH

arXiv supports the OAI protocol for metadata harvesting (OAI-PMH) to provide access to metadata for all articles, updated daily with new articles. This is the preferred way to bulk-download or keep an up-to-date copy of arXiv metadata.

API

arXiv supports real-time programmatic access to metadata and our search engine via the arXiv API. Results are returned using the Atom XML format for easy integration with web services and toolkits.

RSS

arXiv provides RSS feeds of new updates each day. These are intended primarily for human consumption but do use well defined XML formats and thus might be useful to machine applications.

Bulk Full-Text Access

Note: Most articles submitted to arXiv are submitted with the default arXiv license which grants arXiv a perpetual, non-exclusive license to distribute the article, but does not assign copyright to arXiv, nor grant arXiv the right to grant any specific rights to others. We are thus unable to grant others the right to distribute arXiv articles. If you build indexes or tools based on the full-text, you must link back to arXiv for downloads. A small fraction of submissions are made with other licenses and this information is available in the OAI-PMH metadata.

KDD cup dataset

A sample of arXiv source files was collected in 2003 for the KDD cup competition. This dataset may be downloaded from the KDD cup website. This dataset also includes extracted citation data.

Amazon S3

For all articles the processed PDF and source files are available from Amazon S3. We recommend this method for bulk access to the full-text of arXiv articles.

Custom Programmatic Harvesting

As stated on our robots page, arXiv has limited server capacity and our first priority is to support interactive use by human users. That said, we are plainly aware that interested parties will want to make use of our corpus.

Play nice

We ask that users intent on harvesting use the dedicated site `export.arxiv.org` for these purposes, which contains an up-to-date copy of the corpus and is specifically set aside for programmatic access. This will mitigate impact on readers who are using the main site interactively.

There are many users who want to make use of our data, and millions of distinct URLs behind our site. If everyone were to crawl the site at once without regard to a reasonable request rate, the site could be dragged down and unusable. For these purposes we suggest that a *reasonable rate* to be bursts at 4 requests per second with a 1 second `sleep`, per burst.

Consider the impact

arXiv already operates with limited resources, and mindlessly downloading all of the URLs of this site will return terabytes of data. This represents both a financial burden to arXiv, as well as a practical problem for the unwary.

Please do not attempt to download the complete corpus programmatically. The Amazon S3 buckets are the accepted mechanism to download the complete corpus, but you are welcome to "play catch-up" programmatically between updates of the buckets.

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