Online Research Browsers and Data Visualization Tools 2021

An Internet MiniGuide Annotated Link Compilation

By

Marcus P. Zillman, M.S., A.M.H.A.
Executive Director – Virtual Private Library
zillman@virtualprivatelibrary.com

This Internet MiniGuide Annotated Link Compilation is dedicated to the latest and most competent sources for Online Research Browsers and Data Visualization Tools 2021. With the constant addition of new and pertinent information coming online every second it is very easy to go into information overload. The true key is to be able to identify the important information and how that information relates to other information resources through information visualization that will aid you in the creation of new intelligence and research data using online research browsers and tools. The following research browser and data Visualization tool sites offer excellent information on research and analysis to help you accomplish that research goal!

22 Best Data Visualization Tools in 2020 (Free/Paid)
Data visualization tools are cloud-based applications that help you to represent raw data in easy to understand graphical formats. You can use these programs to produce customizable bar charts, pie charts, column charts, and more. This is a handpicked list of Top Data Visualization Tools with their popular features and website links. The list contains both open-source(free) and commercial(paid) software.

Amazon Browser
http://www.touchgraph.com/amazon
Amazon Browser powered by TouchGraph is a tool for browsing the mass of literature, music and film contained in the Amazon database, by exploring links between related items. This will launch Amazon Browser in a new window, containing your search terms in the central node, with links to the first 10 search results in the surrounding nodes. Double-clicking on one of the surrounding nodes will expand the graph to include the first 10 related articles. Clicking on the 'inf' icon above each node will display a hint window containing the summary, a link to prices from international Amazon stores, one
recommended customer review, and a link that will direct you to the item at Amazon.com, from where you can read more information, add to your shopping cart or wish list and checkout.

**ambiently - Discover Related Websites for Every Webpage You Browse**
http://www.ambiently.com/
Ambiently semantically connects webpages of similar or related meanings together. Click the Ambient Page" bookmarklet on your browser to find unexpected and useful websites for any webpage you are viewing. Ambiently is a startup company developing web applications. Envisioning the broad usage and benefits of creating a page-centric "ambient web" for every page on the web, Ambiently aims to create a new, richer web browsing and search experience for all web users.

**AuthorMapper**
http://authormapper.com/
AuthorMapper, an online tool for visualizing scientific research, enables document discovery based on author locations and geographic maps. Integrating content and mapping technology, AuthorMapper provides an easy-to-use, dynamic interface that allows you to: a) Explore patterns in scientific research; b) Identify new and historic literature trends; c) Discover wider relationships; and d) Locate other experts in your field.

**BASE – Bielefeld Academic Search Engine**
https://www.base-search.net/
BASE is one of the world's most voluminous search engines especially for academic web resources. BASE provides more than 100 million documents from more than 5,000 sources. You can access the full texts of about 60% of the indexed documents for free (Open Access). BASE is operated by Bielefeld University Library. They are indexing the metadata of all kinds of academically relevant resources - journals, institutional repositories, digital collections etc. - which provide an OAI interface and use OAI-PMH for providing their contents (see their Golden Rules for Repository Managers and learn more about OAI at the Open Archives Initiative or Wikipedia). The index is continuously enhanced by integrating further sources (you can suggest a source which is not indexed yet). We are working on several new features like a claiming service for authors within the ORCID DE project.

**Better World Flux**
http://www.betterworldflux.com/
Better World Flux is a beautiful interactive visualization of information on what really matters in life. Indicators like happiness, life expectancy, and years of schooling are meaningfully displayed in a colourful flowing Flux. Better World Flux visually
communicates the world state in terms of standards of living and quality of life for many countries and how this has changed, and mostly improved, over a period of up to 50 years. This site is a tool for building a consensus, telling a story and sharing it, all whilst raising awareness for the UN Millennium Development Goals.

BibSonomy - The Blue Social Bookmark and Publication Sharing System
http://www.bibsonomy.org/
BibSonomy helps you to organize your scientific work. Use BibSonomy to collect publications and bookmarks, to collaborate with your colleagues, and to discover interesting researches for your daily work. Features include: 1) Collect - Ready your browser for BibSonomy: Using BibSonomy you can easily create collections of bookmark and publication posts. Just insert bookmarks and publications. You can do this even faster with our BibSonomy browser add-ons or bookmarklets. In addition, you can also use ISBN, ISSN, DOI, or barcodes to have the insert publication form filled up automatically for you. Use tags to organize the posts in your collection. If you choose them carefully, tags are a very powerful instrument; 2) Manage - Easily create bibliographies: BibSonomy helps you create bibliographies for scientific papers. If you use a specific tag for each bibliography and assign it to all your paper posts accordingly, you can use the tag to find all papers of the bibliography. Afterwards, you can export your publication list in the desired format. BibSonomy supports a lot of formats, e.g. Microsoft Word Reference Manager, EndNote, and BibTeX; 3) Collaborate - Find colleagues or fellow students and use groups for collaboration: Use the search to find other users. On a users page, you can add them as friends. In the friends overview you can see which posts you are sharing with you friends and which posts your friends are sharing with you. Groups offer easier means for collaboration. When adding new posts, set if the post should be private, visible for all, or only visible for certain groups. Because of copyright documents are only visible private. Within a group, they can be made visible to other group members; and 4) Discover - Find interesting content: Discover new interesting publications for your scientific activities. The fulltext search of BibSonomy helps you doing so. Beyond that, you can use the search field to filter your post lists by tags, authors and users. Be inspired by the tag clouds. Click on interesting tags, to filter the post lists for special topics. This way, you can browse through topics easily and find related contents by concept.

Business Intelligence Dashboards for Informed Decision Making
https://insightsoftware.com/promos/dashboard-software-demo/
Easily build custom data visualizations on a platform made for the complexity and dimensions of financial data. Designed for finance users who need to be able to drill into the underlying data without changing screens. Create real-time data visualizations. Get the data you need to create dashboards directly inside Excel that will empower your organization to make strategic decisions.
CORE
https://core.ac.uk/search
CORE’s mission is to aggregate all open access research outputs from repositories and journals worldwide and make them available to the public. In this way CORE facilitates free unrestricted access to research for all.

DataMelt – Computation and Visualization Environment
https://jwork.org/home/datamelt/
DataMelt ("DMelt") is a free software for numeric computation, mathematics, statistics, symbolic calculations, data analysis and data visualization. This program combines the simplicity of scripting languages, such as Python, Ruby, Groovy (and others), with hundreds of Java numerical and graphical packages. Unlike other similar programs, DataMelt can be used for scientific computations using Java, word's most-popular enterprise programming language. The program runs on Windows/Mac OS/Linux and Android platform. DataMelt is a modern version of jHepWork (2005-2013) and SCaVis (2013-2015) programs.

Data Visceralization: Enabling Deeper Understanding of Data Using Virtual Reality
A fundamental part of data visualization is transforming data to map abstract information onto visual attributes. While this abstraction is a powerful basis for data visualization, the connection between the representation and the original underlying data (i.e., what the quantities and measurements actually correspond with in reality) can be lost. On the other hand, virtual reality (VR) is being increasingly used to represent real and abstract models as natural experiences to users.

Data Visualization and Big Data Analytics
http://www.datameer.com/
Datameer’s extensive library of widgets includes tables, graphs, charts, diagrams, maps, and tag clouds which enables users to create simple dashboards or beautiful visualizations. The end result, data visualizations that communicate data. Beyond static business intelligence dashboards, Datameer provides a Business Infographics™ designer where your data visualizations have no built-in constraints. With support for shapes such as arrows, icons and more, users can highlight or accent anything in an infographic or dashboard.

Data Visualization Beginner’s Guide: A Definition, Examples, and Learning Resources
https://www.tableau.com/learn/articles/data-visualization
Data visualization is the graphical representation of information and data. By using
visual elements like charts, graphs, and maps, **data visualization** tools provide an accessible way to see and understand trends, outliers, and patterns in **data**. In the world of Big Data, data visualization tools and technologies are essential to analyze massive amounts of information and make data-driven decisions.

**Data Visualizations, Challenges Community**  
[https://www.visualizing.org/](https://www.visualizing.org/)  
A community of creative people making sense of complex issues through data and design

**Data Visualization Software by Zoho Analytics**  
[https://www.zoho.com/](https://www.zoho.com/)  
Import data into Zoho Analytics from a variety of data sources such as local files, web URLs, cloud drives (Google Spreadsheets, Box, Microsoft OneDrive etc), local and cloud databases, popular business applications, custom applications etc., for in-depth analysis. Make use of a variety of charts, widgets, pivot tables and tabular view components to create insightful reports and dashboards with an easy drag-and-drop interface.

**Data Visualization – Wikipedia**  
**Data visualization** is the **graphic representation** of **data**. It involves producing images that communicate relationships among the represented data to viewers of the images. This communication is achieved through the use of a systematic **mapping** between graphic marks and data values in the creation of the visualization. This mapping establishes how data values will be represented visually, determining how and to what extent a property of a graphic mark, such as size or color, will change to reflect changes in the value of a datum. To communicate information clearly and efficiently, data visualization uses **statistical graphics, plots, information graphics** and other tools. Numerical data may be encoded using dots, lines, or bars, to visually communicate a quantitative message. Effective visualization helps users analyze and reason about data and evidence. It makes complex data more accessible, understandable and usable. Users may have particular analytical tasks, such as making comparisons or understanding **causality**, and the design principle of the graphic (i.e., showing comparisons or showing causality) follows the task. Tables are generally used where users will look up a specific measurement, while charts of various types are used to show patterns or relationships in the data for one or more variables.
Facebook Browser by TouchGraph
http://www.touchgraph.com/facebook
TouchGraph Facebook Browser lets you see how your friends are connected, and who has the most photos together. Explore your networks by graphing photos from anyone's album, or view the connections between members of a group.

Figshare - Store, Share, Discover Research
https://figshare.com/
figshare is a repository where users can make all of their research outputs available in a citable, shareable and discoverable manner. figshare allows users to upload any file format to be previewed in the browser so that any research output, from posters and presentations to datasets and code, can be disseminated in a way that the current scholarly publishing model does not allow. The figshare team now spans 3 continents and specializes in building best of breed software to securely and persistently store, manage and visualize data in a robust and scalable manner. Get more citations for all of the outputs of your academic research over 5000 citations of figshare content to date

Gephi - The Open Graph Viz Platform
https://gephi.org/
Gephi is the leading visualization and exploration software for all kinds of graphs and networks. Gephi is open-source and free. Runs on Windows, Mac OS X and Linux. Gephi is a tool for data analysts and scientists keen to explore and understand graphs. Like Photoshop™ but for graph data, the user interacts with the representation, manipulate the structures, shapes and colors to reveal hidden patterns. The goal is to help data analysts to make hypothesis, intuitively discover patterns, isolate structure singularities or faults during data sourcing. It is a complementary tool to traditional statistics, as visual thinking with interactive interfaces is now recognized to facilitate reasoning. This is a software for Exploratory Data Analysis, a paradigm appeared in the Visual Analytics field of research. Applications include: a) Exploratory Data Analysis: intuition-oriented analysis by networks manipulations in real time; b) Link Analysis: revealing the underlying structures of associations between objects; c) Social Network Analysis: easy creation of social data connectors to map community organizations and small-world networks; d) Biological Network analysis: representing patterns of biological data; and e) Poster creation: scientific work promotion with hi-quality printable maps.

Ggplot2
https://ggplot2.tidyverse.org/
ggplot2 is a system for declaratively creating graphics, based on The Grammar of Graphics. You provide the data, tell ggplot2 how to map variables to aesthetics, what graphical primitives to use, and it takes care of the details. ggplot2 is now over 10 years old and is used by hundreds of thousands of people to make millions of plots. That
means, by-and-large, ggplot2 itself changes relatively little. When we do make changes, they will be generally to add new functions or arguments rather than changing the behaviour of existing functions, and if we do make changes to existing behaviour we will do them for compelling reasons.

**Google Data Studio**  
https://datastudio.withgoogle.com/  
Your data is beautiful. Use it. Unlock the power of your data with interactive dashboards and automated reports that inspire smarter business decisions. Features include: 1) Unite your data in one place - Easily import and visualize your data from spreadsheets, Google Analytics, Google Ads, BigQuery, and many other dashboards or databases. See up-to-date reports for multiple projects and data sources in one easy interface. Integrated with over 150 cloud, SQL, e-commerce, and digital advertising platforms, 2) Explore the data - Transform your advertising performance and other data into easy-to-understand reports and dashboards that fit your business intelligence needs. Monitor your progress for the business metrics you care about, including ad spend, site traffic, search rankings, and more; 3) Tell impactful stories - Create and share data visualizations that automatically turn numbers into insights through engaging charts and graphs. Easily understand your ROI from your business initiatives and digital advertising spend; and 4) Empower your teams - Share marketing and business data with your teams in real time so that everyone can find the answers they need. Boost productivity across teams by helping them access the business data they need to work better cross-functionally. When everyone on the team understands what's impacting the big picture, in real time, and works together to drive better data-driven results — that's teamwork.

**IBM Data Refinery – Profile and Visualize Data**  
https://www.ibm.com/cloud/data-refinery  
Available in IBM Watson® Studio and Watson™ Knowledge Catalog, the data refinery tool saves data preparation time by quickly transforming large amounts of raw data into consumable, quality information that’s ready for analytics.

**Information Visualization Resources on the Web**  
http://graphics.stanford.edu/courses/cs348c-96-fall/resources.html  
A comprehensive site listing information visualization resources available on the Internet with heavy emphasis based on academic sources.
Integrating Information Visualization and Retrieval for WWW Information Discovery
http://portal.acm.org/citation.cfm?id=763071

An important technology in knowledge discovery is to access the desired information from the large amount of data stored on the WWW. At present, such information can be accessed by a browser itself or by using a keyword search function. However, browsing is a time consuming task where a user must access individual pages one by one. Furthermore, in keyword searches, it is difficult for users to provide reasonable keywords in knowledge discovery processes. This paper outlines an approach for integrating information visualization and retrieval into WWW information discovery. In this approach, the link structure of a web site is displayed in a 3-D hyperbolic tree in which the height of a node (corresponding to a web page) within the tree indicates a user's "interest" for each page. Here, interest is calculated by a fitting function between a page and a user-supplied query (nested keywords). This measure can be used to filter uninteresting pages, reducing the size of the link structure. Furthermore, each web page is modeled as semi-structured data and can also be displayed as a hyperbolic tree in which the result of query evaluation is visible.

Kartoo
http://www.kartoo.com/
KartOO is a metasearch engine with visual display interfaces. When you click on OK, KartOO launches the query to a set of search engines, gathers the results, compiles them and represents them in a series of interactive maps through a proprietary algorithm.

Knoema Knowledge Platform
http://knoema.com/
Knoema is a knowledge platform. The basic idea is to connect data with analytical and presentation tools. As a result, we end with one uniformed platform for users to access, present and share data-driven content. Within Knoema, we capture most aspects of a typical data use cycle: accessing data from multiple sources, bringing relevant indicators into a common space, visualizing figures, applying analytical functions, creating a set of dashboards, and presenting the outcome.

Knowledge Discovery 2021 Subject Tracer™
http://www.KDResources.info/
A Subject Tracer monitoring knowledge discovery resources including a number of information visualization research browsers. Powered by bots and continually updated. Sources listed alphabetically with name and URL.
Lazy Scholar - Browser Extension
http://www.lazyscholar.org/
Finds free scholarly full texts, metrics, and provides quick citation and sharing links automatically. Features include: a) Automatic Full Text Search - Open any scholarly article and Lazy Scholar gets to work searching for a free full text; b) New Recommendations - Lazy Scholar can learn what topics you like to read and scans new PubMed listings to suggest new papers; c) Metrics - Lazy Scholar provides various citation metrics. (Google Scholar, Microsoft Academic, Web of Science; Impact factor, Altmetric, etc); d) Search History - Can’t find that paper you opened yesterday? Lazy Scholar saves your history and provides an interface to find it; e) Quick Citation - A preformed citation available in over 900 citation styles; and f) Related Papers - Quickly identify other papers you may want to read.

Matplotlib
https://matplotlib.org/
Matplotlib is a plotting library for the Python programming language and its numerical mathematics extension NumPy. It provides an object-oriented API for embedding plots into applications using general-purpose GUI toolkits like Tkinter, wxPython, Qt, or GTK+

Mirador
https://fathom.info/mirador/
Mirador is a tool for visual exploration of complex datasets. It enables users to discover correlation patterns and derive new hypotheses from the data. Mirador is an open source project released under the GNU Public License v2. It is the result of a collaboration between the Sabeti Lab at Harvard University, the Broad Institute of MIT and Harvard, and Fathom Information Design. Initial support was provided by the Center of Communicable Disease Dynamics and the MIDAS network funded by the National Institutes of Health.

Open Access Button
https://openaccessbutton.org/
Free, legal research articles delivered instantly or automatically requested from authors. Give them a scholarly paper and they will search thousands of sources with millions of articles to link you to free, legal, full text articles instantly. If they can’t get you access, they will start a request for you. They request articles from authors, and guide them on making the work available to you and everyone who needs it. You can do this from their website, browser extensions, tools for libraries or their API. Take your pick ….
Orange Data Mining  
http://orange.biolab.si/  
Open source machine learning and data visualization for novice and expert. Interactive data analysis workflows with a large toolbox. Perform simple data analysis with clever data visualization. Explore statistical distributions, box plots and scatter plots, or dive deeper with decision trees, hierarchical clustering, heatmaps, MDS and linear projections. Even your multidimensional data can become sensible in 2D, especially with clever attribute ranking and selections. Interactive data exploration for rapid qualitative analysis with clean visualizations. Graphic user interface allows you to focus on exploratory data analysis instead of coding, while clever defaults make fast prototyping of a data analysis workflow extremely easy. Place widgets on the canvas, connect them, load your datasets and harvest the insight!

Nanocubes® - Fast Visualization of Large Spatiotemporal Datasets  
http://www.nanocubes.net/  
The Nanocubes® technology provides you with real-time visualization of large datasets. Slice and dice your data with respect to space, time, or some of your data attributes, and view the results in real-time on a web browser over heatmaps, bar charts, and histograms. They have used it for tens of billions of data points: maybe you can push it even farther! The main Nanocubes program is a command-line utility that processes your data and starts a web server to answer query requests. They provide Javascript APIs for visualization. But the Nanocubes program can be used for fast analysis of your data as well: you can think of it as a very fast (if somehow limited) database query engine. As an illustrative example, we have used anomaly detection routines to query the Nanocubes engine and output potential outliers and hotspots.

Panopticlick – Is Your Browser Safe Against Tracking?  
https://panopticlick.eff.org/  
When you visit a website, online trackers and the site itself may be able to identify you – even if you’ve installed software to protect yourself. It’s possible to configure your browser to thwart tracking, but many people don’t know how. Panopticlick will analyze how well your browser and add-ons protect you against online tracking techniques. We’ll also see if your system is uniquely configured—and thus identifiable—even if you are using privacy-protective software.

Point - Use Point To Send and Discuss Webpages with Friends  
http://www.getpoint.co/  
Use Point To Send and Discuss Webpages with Friends. Features include: a) The quickest way to send a link - With Point, you can send a link without leaving the page or app you are in; b) Everyone’s on the same page - Point sits alongside what you’re sharing, allowing you to easily quote the best parts; c) All your links in one place - Point
saves everything you send or receive in your inbox – accessible from our browser extension and iPhone app; and d) You don’t need friends on Point - While Point works best with a few close friends, it also works fabulously with email contacts.

QueryTree – Open Source Ad Hoc Reporting and Visualization
https://querytreeapp.com/
QueryTree is an open source ad hoc reporting and visualization solution for your app. Download and run it from Source, Binaries or using Docker, then connect it to any Microsoft SQL Server, MySQL or PostgreSQL database, and you’re good to go. As your app’s missing report screen, QueryTree enables technical and non-technical users alike can easily select, filter, group, aggregate and visualize data from any table in any database. Users can export their results, share reports with their team, and set up schedule emails to keep everyone updated.

Scientific Data Repository - Real Time Visualization and Exploration Techniques
http://www.mlvis.com/platform.php
This project is the first to combine the notion of a data repository with real-time visual analytics for interactive data mining and exploratory analysis on the web. State-of-the-art statistical techniques are combined with real-time data visualization giving the ability for researchers to seamlessly find, explore, understand, and discover key insights in a large number of public donated data sets. This large comprehensive collection of data is useful for making significant research findings as well as benchmark data sets for a wide variety of applications and domains and includes relational, attributed, heterogeneous, streaming, spatial, and time series data as well as non-relational machine learning data. All data sets are easily downloaded into a standard consistent format. They also have built a multi-level interactive visual analytics engine that allows users to visualize and interactively explore the data in a free-flowing manner.

Seaborn
https://seaborn.pydata.org
Seaborn is a library for making statistical graphics in Python. It is built on top of matplotlib and closely integrated with pandas data structures. Seaborn aims to make visualization a central part of exploring and understanding data. Its dataset-oriented plotting functions operate on dataframes and arrays containing whole datasets and internally perform the necessary semantic mapping and statistical aggregation to produce informative plots.

SEO Browser by TouchGraph
http://www.touchgraph.com/seo
TouchGraph SEO Browser reveals the network of connectivity between websites, as reported by Google's database of related sites.
Sputnik – An Open Source Intelligence Browser Extension
https://github.com/mitchmoser/sputnik
Sputnik is an extension to quickly and easily search IPs, Domains, File Hashes, and URLs using free Open Source Intelligence (OSINT) resources.

Tableau Data Visualization – Free Data Visualization Tool
https://www.tableau.com/
Data visualization is the graphical representation of information and data. With visual elements like charts, graphs, and maps, data visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data. In the world of big data, data visualization tools and technologies are essential to analyze massive amounts of information and make data-driven decisions. Their culture is visual, including everything from art and advertisements to TV and movies, and our eyes are drawn to colors and patterns. Their interaction with data should reflect this reality.

The Best Data Visualization Tools for 2020
https://www.pcmag.com/picks/the-best-data-visualization-tools
Where business intelligence (BI) tools help with parsing large amounts of data, visualization tools help present that data in new ways to facilitate understanding and decision making. They test the latest crop of these business aids to help you get the most from your data.

The Open Observability Platform
https://grafana.com/
Grafana is the open source analytics and monitoring solution for every database.

ThinkMap
http://www.thinkmap.com/
Thinkmap is a software platform for developing customized visualization interfaces to complex data. The software provides a system for crafting visualizations with structured data in order to make the information more intuitive, accessible, manageable and meaningful. Thinkmap visualizations can make relationships in the data more apparent than can traditional line or column displays and can improve understanding and discovery.

Tinderbox – The Tool for Notes
http://www.eastgate.com/Tinderbox/
Tinderbox maps your notes as you make them. Build relationships by arranging notes, organizing them with shape and color, linking them. Tinderbox lets you record ideas quickly and keep them where you'll find them again when you need them
TorchBrowser - Free and Unique Powerful Browsing
http://torchbrowser.com/
Torch is a free and unique software that offers you powerful browsing together with built-in media downloading and sharing features. Torch Browser is based on the Chromium technology platform, giving it fast browsing capabilities. With Torch, you can share sites you like, download torrents, accelerate downloads and grab online media - all directly from the browser. Everything you need is a just click away with Torch, so you don't have to use or download additional programs and tools. Their software has a user friendly interface, is easy to install, and safe to use.

Tor Project – Tor Browser
https://www.torproject.org/
The Tor software protects you by bouncing your communications around a distributed network of relays run by volunteers all around the world: it prevents somebody watching your Internet connection from learning what sites you visit, it prevents the sites you visit from learning your physical location, and it lets you access sites which are blocked. The Tor Browser lets you use Tor on Windows, Mac OS X, or Linux without needing to install any software. It can run off a USB flash drive, comes with a pre-configured web browser to protect your anonymity, and is self-contained (portable).

TouchGraph - Visualize and Interact with Information
http://www.touchgraph.com/
TouchGraph was founded in 2001 with the creation of the original visual browser for Google. Since then, millions of people have used TouchGraph's tools to discover the relationships contained in Google, Amazon, Wikis, and other popular information sources. Our commercial applications include solutions for companies in management consulting, social networking, and mass media. TouchGraph's approach is unique because their highest priorities are utility and ease of use. They start with the premise of a scientific or business application, and work to create a clear and intuitive interface that gets their customers the results they need. They avoid superfluous artistic effects in favor of a clear presentation. Their applications are designed to simplify navigation, filtering, and visual metaphors. They reveal important relationships and details in your data without reducing the richness of the information itself.

Tracking the State of Open Government Data
https://index.okfn.org/
The Global Open Data Index provides the most comprehensive snapshot available of the state of open government data publication.
Unpaywall – Research Papers for Free
http://unpaywall.org/
Millions of research papers are available for free on government and university web servers, legally uploaded by the authors themselves, with the express permission of publishers. Unpaywall automatically harvests these freely shared papers from thousands of legal institutional repositories, preprint servers, and publishers, making them all available to you as you read. Unpaywall users are able to read over 52% of research papers for free—without having to pay money, fuss with a VPN, or use pirate sites like Sci-Hub. That's because we're built on a database of millions of open-access articles harvested from thousands of servers worldwide. When you browse to a paywalled paper, we check to see if we have a free copy. If we do, you'll see a green tab...just click, and read.

Visualization Laboratory (VISLAB)
https://www.tacc.utexas.edu/vislab
The TACC Visualization Laboratory (Vislab) is a state-of-the-art facility where staff explores the intersection between human perception and large-scale visual analysis through the study of visualization and interactive displays. The Vislab serves as a research hub for human-computer interaction, tiled display software development, and visualization consulting.

Visualizing Bibliographic MetaData – A Virtual (Book) Spine Viewer by Naomi Dushay
http://www.dlib.org/dlib/october04/dushay/10dushay.html
User interfaces for digital information discovery often require users to click around and read a lot of text in order to find the text they want to read—a process that is often frustrating and tedious. This is exacerbated because of the limited amount of text that can be displayed on a computer screen. To improve the user experience of computer mediated information discovery, information visualization techniques are applied to the digital library context, while retaining traditional information organization concepts. In this article, the "virtual (book) spine" and the virtual spine viewer are introduced. The virtual spine viewer is an application which allows users to visually explore large information spaces or collections while also allowing users to hone in on individual resources of interest. The virtual spine viewer introduced here is an alpha prototype, presented to promote discussion and further work. [Note: 2004 Publication but worth a read]

Visual.ly – Empowers People To Tell Stories With Data
http://visual.ly/
Visually is the largest data visualization showcase in the world, providing endless inspiration for designers, publishers and enthusiasts. Visually’s free tools make it easy for
anyone to create beautiful, personalized infographics in minutes. What stories will you tell?

**Vivaldi - Power User Browser**
https://vivaldi.com/
You spend a lot of time on the web. You deserve a browser that is personal, has the functionality you need and the flexibility you crave. You deserve Vivaldi so we made it for you. Get an in-depth overview of your browsing habits, backed by statistics and visual data. With History more useful than ever before, you can quickly scan through visited websites and get helpful hints for finding old links. Found that perfect quote for your essay or article? Copy that text to the notes panel, adding a link at the same time. Add a screen shot, just in case the page changes. The world is a colorful place because we are all different and unique. We at Vivaldi believe in making software that lets you do things your way. We adapt to you! With Vivaldi you can customize the browser the way you want. Do you prefer the browser tabs placed at the bottom or on the side of the window? Or, a different location for the address bar? Whether it's your keyboard shortcuts, mouse gestures, appearance or a modification to address color blindness, Vivaldi gives you the tools. Do you tend to keep many tabs open in your browser? Organize the view using Tab Stacking. This feature lets you group multiple tabs into one. Just drag a tab over to another for an uncomplicated grouping. With Tab Stack Tiling, you can display multiple tabs side by side or in a grid layout. Through multiple tab stacks that are tiled, you have multiple desktops, which you can switch between with a single click. More power to you!

When buying a new car, you are given a choice of colors and customized features. With Vivaldi, you aren't limited to our sense of style. Drive your own style with our many included themes, or easily make your own! Do you like command line control? Then Vivaldi is sure to delight. Quick Commands let you search through open tabs, bookmarks, history, settings and more from a command line interface. One of the things that makes Vivaldi unique is that it is built on modern web technologies. We use JavaScript and React to create the user interface with the help of Node.js and a long list of NPM modules. Vivaldi is the web built with the web.

**Website Downloader**
https://websitedownloader.io/
Download all the source code and assets of any website. Features include: a) Key Benefits - Easiest way to download a website; b) Platform Independent - The web based interface enables you to use website ripper straight in your browser on any operating system and without downloading or configuring any software. Use it when you need to quickly download website; c) Fast Previews - Website Downloader offers a fast preview of the download result hosted on our servers without consuming your computer's precious disk space. After the preview you can download web page or download entire website; and d) Simplicity - Website Downloader is super simple and easy to use, yet it
comes with advanced functionality such as only downloading a subdirectory or certain pages from a website (as a web page downloader). Website grabber is the easiest way to download a website. Website Downloader, Website Copier or Website Ripper allows you to download websites from the Internet to your local hard drive on your own computer. Website Downloader arranges the downloaded site by the original websites relative link-structure.

**WhatRuns - Discover What Runs a Website**
https://www.whatruns.com/
WhatRuns is a new but advanced browser extension that helps you identify web technologies used on any website. Our proprietary pattern recognition algorithm efficiently detects even the latest web technologies and plugins used on websites. WhatRuns extension can be used for competitor analysis, sales intelligence and website profiling.

**Zotero – Personal Research Assistant**
https://www.zotero.org/
Zotero is the only research tool that automatically senses content in your web browser, allowing you to add it to your personal library with a single click. Whether you're searching for a preprint on arXiv.org, a journal article from JSTOR, a news story from the *New York Times*, or a book from your university library catalog, Zotero has you covered with support for thousands of sites. Zotero collects all your research in a single, searchable interface. You can add PDFs, images, audio and video files, snapshots of web pages, and really anything else. Zotero automatically indexes the full-text content of your library, enabling you to find exactly what you're looking for with just a few keystrokes.

**Zeef – Data Visualization Resources**
https://zeef.com/?query=Data%20Visualization&in=all
Found over 277 data visualization resources, sources and tools from individuals whose curated directories for development and tech resources are constantly updated.
Subject Tracer™ Information Blogs

Subject Tracer™ Information Blogs created and developed by the Virtual Private Library™ combine the best of the latest tools on the Internet. Using bots, blogs and news aggregators the Subject Tracer™ Information blogs generate RSS feeds with the latest resources to create a current information resource flow through niched subject tracers. I am proud to be the creator of the Internet’s first Subject Tracer™ Information Blogs:

Virtual Private Library™
http://www.VirtualPrivateLibrary.com/

Accessibility Resources
http://www.AccessibilityResources.info/

Agriculture Resources
http://www.AgricultureResources.info/

AnswerSpot
http://www.AnswerSpot.us/

Artificial Intelligence Resources
http://www.AIResources.info/

Astronomy Resources
http://www.AstronomyResources.info/

Auction Resources
http://www.AuctionResources.info/

Biological Informatics
http://www.BiologicalInformatics.info/

Biotechnology Resources
http://www.BiotechnologyResources.info/

Bot Research
http://www.BotResearch.info/

Business Intelligence Resources
http://www.BIResources.info/
ChatterBots
http://www.ChatterBots.info/

Data Mining Resources
http://www.DataMiningResources.info/

Deep Web Research
http://www.DeepWebResearch.info/

Directory Resources
http://www.DirectoryResources.info/

eCommerce Resources
http://eCommerceResources.info/

Education and Academic Resources
http://www.EducationResources.info/

Elder Resources
http://www.ElderResources.info/

Employment Resources
http://www.EmploymentResources.info/

Entrepreneurial Resources
http://www.EntrepreneurialResources.info/

Fact Checkers Directory
http://www.FactCheckers.us/

Financial Sources
http://www.FinancialSources.info/

Finding People
http://www.FindingPeople.info/

Games Resources
http://www.GamesResources.info/

Genealogy Resources
http://www.GenealogyResources.info/
Grant Resources
http://www.GrantResources.info/

Green Files
http://www.GreenFiles.info/

Grid, Distributed and Cloud Computing Resources
http://www.GridResources.info/

Healthcare Resources
http://www.HealthcareResources.info/

Information Futures Markets
http://www.InformationFuturesMarkets.com/

Information Quality Resources
http://www.InformationQualityResources.info/

International Trade Resources
http://www.InternationalTradeResources.info/

Internet Alerts
http://www.InternetAlerts.info/

Internet Demographics
http://www.InternetDemographics.info/

Internet Experts
http://www.InternetExperts.info/

Internet Hoaxes
http://www.InternetHoaxes.info/

Intrapreneural Resources
http://www.IntrapreneurialResources.info/

Journalism Resources
http://www.JournalismResources.info/

Knowledge Discovery
http://www.KnowledgeDiscovery.info/
Military Resources
http://www.MilitaryResources.info/

New Economy Analytics, Resources and Alerts
http://www.NewEconomyAnalytics.com/

Outsourcing/Offshoring Information and Resources
http://www.OutsourcingOffshore.us/

Privacy Resources
http://www.PrivacyResources.info/

Reference Resources
http://www.ReferenceResources.info/

Research Resources
http://www.ResearchResources.info/

RestStress™
http://www.RestStress.com/

Script Resources
http://www.ScriptResources.info/

ShoppingBots
http://www.ShoppingBots.info/

Social Informatics
http://www.SocialInformatics.info/

Statistics Resources and Big Data
http://www.StatisticsResources.info/

Student Research
http://www.StudentResearch.info/

Theology Resources
http://www.TheologyResources.info/

Tutorial Resources
http://www.TutorialResources.info/
World Wide Web Reference
http://www.WWWReference.info/

Author Information: Marcus P. Zillman, M.S., A.M.H.A. Executive Director of the Virtual Private Library is an international Internet expert, author, keynote speaker and corporate consultant in the area of information retrieval, knowledge discovery, knowledge harvesting, artificial intelligence and bots/intelligent agents. He has created numerous world wide web sites including 54 Subject Tracer™ Information Portals and Blogs; written a number of internet miniguide, white papers, manuals and books; hosted over 160 weekly Internet television shows, writes a weekly and monthly column on Current Awareness on the Internet; writes a monthly newsletter Awareness Watch and delivers keynote presentations throughout the international marketplace. He also actively delivers one and two day workshops for key industry sectors displaying how the Internet can be used as a tool to maintain current awareness and professional competencies.

Additional websites by Marcus P. Zillman, M.S., A.M.H.A.:

Marcus P. Zillman's Blog (26,000+ Postings)
http://www.zillman.us/
2021 Guide to Finding Experts by Using the Internet
http://www.FindingExperts.info/

2021 Guide to Finding People Resources and Sites
http://www.FindingPeople.info/

2021 Guide to Internet Privacy Resources and Tools
http://www.2021InternetPrivacy.com/

2021 Guide to Searching the Internet
http://www.SearchingTheInternet.info/

2021 New Economy Resources
http://www.2021NewEconomy.com/

Academic and Scholar Search Engines and Sources 2020
http://www.ScholarSearchEngines.com/

Bots, Blogs and News Aggregators 2021
http://www.BotsBlogs.com/

Business Intelligence Online Resources 2020
http://www.BIOntlineResources.info/

Cloud Computing Resources Primer 2020
http://www.zillman.us/white-papers/grid-distributed-and-cloud-computing-resources-primer/

Current Awareness Discovery Tools on the Internet 2021

Deep Web Research and Discovery Resources 2020 Online White Paper
http://DeepWeb.us/

eMarketing MiniGuide 2020
http://www.eMarketingMiniGuide.com/

eReference Library Link Toolkit 2020
http://www.eReferenceLibrary.com/
Online Research Browsers and Data Visualization Tools 2021
http://www.zillman.us/white-papers/online-research-browsers/

Finding Experts By Using the Internet 2021
http://www.FindingExperts.info/

Finding People Resources and Sites 2021
http://www.FindingPeople.info/

Healthcare Resources 2021
http://www.HealthcareResources.info/
http://www.HealthPathFinders.com/

Knowledge Discovery Resources 2021
http://www.KDResources.info/

New Economy Resources 2021
http://www.NewEconomyResources.com/

Online Research Browsers and Data Visualization Tools 2021
http://www.zillman.us/white-papers/online-research-browsers/

Online Research Tools
http://www.OnlineResearchTools.info/

Online Social Networking 2021
http://www.OnlineSocialNetworking.info

Searching the Internet 2021
http://www.SearchingTheInternet.info/

Using the Internet As a Dynamic Resource Tool for Knowledge Discovery 2021

Web Data Extractors 2021
http://www.WebDataExtractors.com/

Web Guide for the New Economy 2020

White Papers By Marcus P. Zillman, M.S., A.M.H.A.
http://www.WhitePapers.us/
Internet Tutor by Marcus P. Zillman, M.S., A.M.H.A.
http://www.InternetTutor.info/
Visit this site to learn about the availability of Marcus P. Zillman to tutor you or your associate one on one in the privacy of your residence or office on the latest happenings of the Internet including Internet basics to advanced Internet searching using bots and creating your own personal blog.

Internet Speaking by Marcus P. Zillman, M.S., A.M.H.A.
http://www.InternetSpeaker.net
Visit this site to learn about Marcus P. Zillman’s speaking engagements for your organization meetings and events. View and listen to his previous presentations as well as his weekly television shows.

Internet Consulting by Marcus P. Zillman, M.S., A.M.H.A.
http://InternetConsultant.BlogSpot.com/
Visit this site to obtain information about obtaining the consultation services of Marcus P. Zillman for your company including eCommerce audits, utilization of bots, blogs and news aggregators or the creation of your own personal virtual private library powered by Subject Tracer™ Information bots!

Current Awareness Monitors, Alerts and Information Traps
http://www.ecurrentAwareness.com/
Marcus P. Zillman’s latest report Current Awareness Monitors, Alerts and Information Traps for is available for purchase online and for immediate download. This report is a comprehensive listing of the latest resources, sources and sites for current awareness on the Internet. This is a must read for anyone who must stay current in their profession and/or business activity as the list of URLs will keep you at the leading edge of your career.

Market Intelligence Resources
http://www.MarketIntelligenceResources.com/
Marcus P. Zillman’s just released professional Internet MiniGuide is titled Market Intelligence Resources and is available for purchase online and immediate download. This 193 page digital miniguide represents a comprehensive listing of the latest resources, sources and sites to discover the latest Market Intelligence sources available on the Internet with many of them freely available! Designed specifically for today’s entrepreneur, professional and/or investor.
Entrepreneurial Links 101
http://www.EntrepreneurialLinks.com/
Marcus P. Zillman’s newly released 231 page eReference digital book for the up and coming entrepreneur. Entrepreneurial Links 101 gives an alphabetical listing of the very best Internet and World Wide Web sites covering Entrepreneur Resources, Business Intelligence Resources and an extremely comprehensive list of Online Research Tools. This is considered by many to be the entrepreneur’s bible for finding relevant and competent online resources!

Internet Privacy and Security Resources
http://www.InternetPrivacySecurity.net/
Marcus P. Zillman’s latest eReference digital publication is a selected comprehensive alphabetical listing of the latest resources and sites covering all aspects of privacy and security currently available over the Internet. From the board room to the family room, these resources and sites give you the information you need to maintain your privacy and security as you use the Internet in your business and personal life.

Research Resources Online Guide
http://www.ResearchResourcesOnline.net/
Marcus P. Zillman’s latest LinkSeries Publication is a 340 page digital guide of a selected comprehensive alphabetical listing of the latest and greatest resources and sites covering all areas of research that is currently available over the Internet. The guide covers online research resources and tools for the Newbie to research as well as the Seasoned researcher. Contents include: a) Research Resources, b) Research Tools, c) Student Research Resources Toolkit, d) Knowledge Discovery/Management and Data Mining Resources, e) Knowledge Discovery/Retrieval and the World Wide Web Resources, f) Business Intelligence Resources, g) Reference Resources, and h) Subject Tracer™ Information Blogs.

The Survivor’s Manual for The New Economy.
Marcus P. Zillman’s latest LinkSeries Publication is a 239 page digital read that gives excellent resources and annotated sources for the new economy analytics, alerts, ecommerce, financial sources, invisible and deep web resources, social and business networking sources along with new economy competitive and business intelligence resources and an extremely comprehensive listing of new economy online tools.