

The Internet

You would learn the basics of the Internet, how to effectively search for information online as well as how to evaluate the quality of information sources

Design Of The Internet

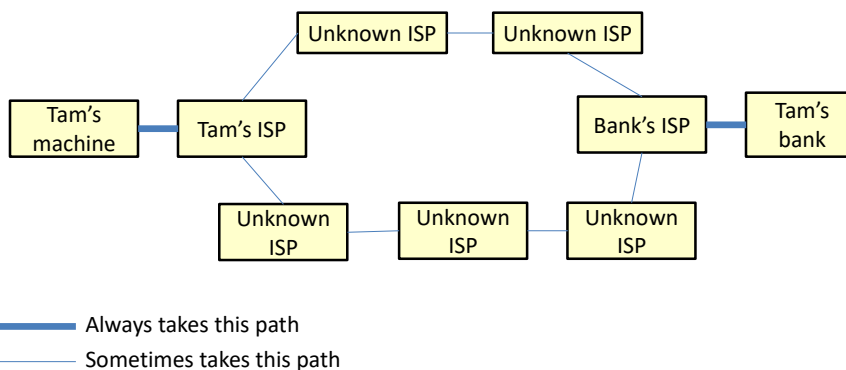
- The original internet designed to connect computers and collaborate/interact with others
 - Consequently a common protocol was developed so connected computer nodes could communicate
 - This is still one of the major uses of the Internet today
 - Connect & interact: Mac, Windows, phone all connected and communicating through web sites like Facebook, Snapchat, Twitter etc.
 - The security of those connections weren't a consideration because access to the computers being connected was restricted (university researchers)

Internet Addresses

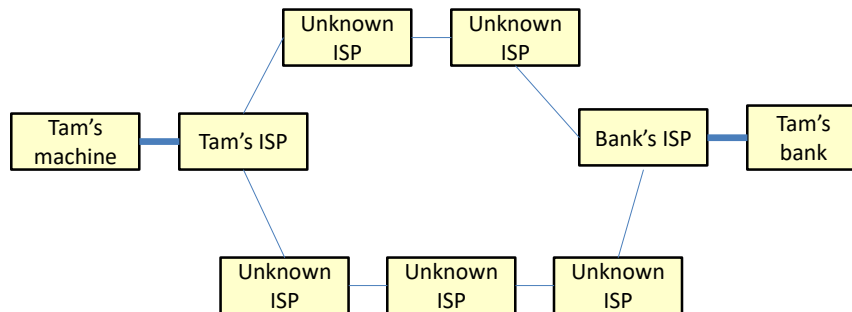
- You are not anonymous on the Internet
 - Don't think you can 'troll' (or do worse things) online with impunity
 - Methods of masking/disguising an IP address (e.g. "Tor") aren't infallible
- Each node (connected device) on the Internet has an address so that information can reach it "IP address" or "IP" for short.
- The address takes the form of a sequence of numbers
- But usually a more meaningful address is used in place of the numeric IP address by users.
 - e.g. www.facebook.com
- The IP address of your Internet devices at home is provided by your Internet service provider/ISP (e.g. Shaw, Telus etc.).
 - Using a free Wi-Fi network will allow your device to get an IP address from the host of that network.

Modern Consequence Of Historical Roots

- Information is typically routed among several computers and may take multiple paths even in one 'session'
- e.g., one session could consist of the viewing of a single video or even a single financial transaction.



Reasons For Multiple Paths Along The Internet

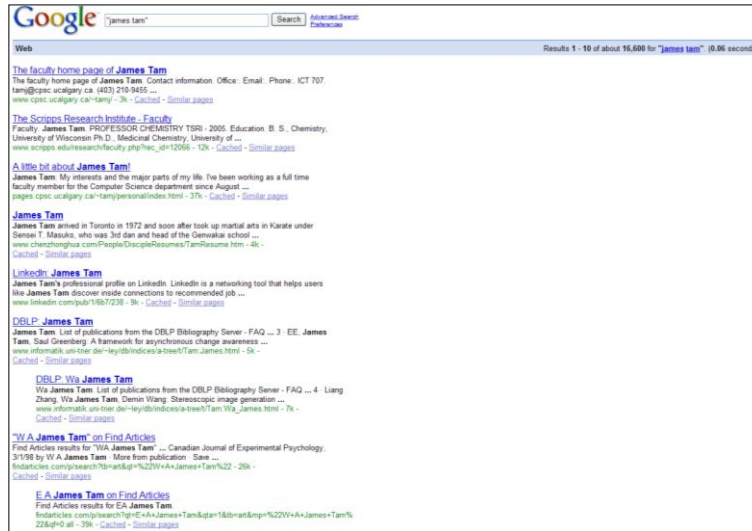


- Benefits:
 - Stability
 - Speed
- Need for an IP address
 - Information may need to be resent.
 - Each 'portion' (packet) of transmitted data needs to contain the IP address of the destination.

Searching For Information Using Google

- There are other search sites.
- Some may actually work as well as (or for some tasks – better than Google).
- We will talk about some of the advantages of some of these other sites later.
- Google however is by far the most popular search site and for simple/common searches it will probably provide at least reasonable results.

Search Websites Rank Results According To Relevance

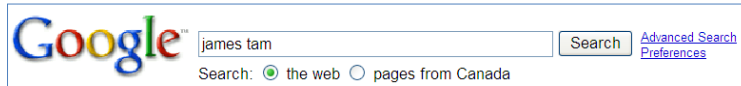


Making Your Site More Noticeable (Higher Rank)

- Old approach (it still applies but it doesn't play as large a role as it used to in the ranking of search results)
 - Add relevant keywords to your page.
 - The frequency and location of keywords may play a role in determining relevance.
 - Trying to artificially rank your page higher in search results may result in a page being put at the bottom of the list (e.g. Your page is listed on page 100 out of 100 pages of results).
 - e.g., adding celebrity 'gossip' to my CPSC page may rank it higher but not relevant info for most visitors.
- Google "Page rank"
 - Links (to your site) also affect ranking ("cross links" between pages)
 - Popular/relevant pages linking to your page rank your page higher on search results than links from irrelevant pages.

Searching For Information On The Internet: Google

- Easy? Just type in what you're searching for...



- ...you may get the information that you were looking for plus much more!



You Will Learn Strategies For Narrowing Your Search Results (This Is For Google But Largely Applies To Other Sites):

1. Reducing the number of unrelated results.
2. Explicitly avoiding pages with certain words.
3. Searching for information from select pages.

Source (last accessed 2009): <http://www.google.com/support/websearch> and <http://www.googleguide.com>

Employing These Search Strategies

- Many (but not all) of the features can be found through an “Advanced Search” subpage of the Google site.
 - http://www.google.com/advanced_search
- There are several options on this page (to be covered shortly):

Find pages with...

all these words:

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from: to

Then narrow your results by:

language:

region:

last update:

site or domain:

terms appearing:

SafeSearch:

reading level:

file type:

usage rights:

Searching For Exact Phrases

- Sometimes you may be looking for information about a famous quote.
 - Want: “This was their finest hour!” – Winston Churchill

Google search for "this was their finest hour". The search bar contains the text "this was their finest hour" and the search button is labeled "Search". Below the search bar, the results are displayed. The first result is from Wikipedia, titled "This was their finest hour - Wikipedia, the free encyclopedia". The second result is from Winston Churchill Speech - Their Finest Hour. The third result is an audio file titled "Audio: Winston Churchill's 'This Was Their Finest Hour' Speech". The fourth result is a video titled "Video results for this was their finest hour". The fifth result is a YouTube video titled "YouTube - Winston Churchill - This Was Their ...". The sixth result is a Freespace 2 SCP - Their Finest hour mission. The seventh result is a Free MP3 Compilation titled "Free MP3 Compilation: Best Of Netlabels: 'Their Finest Hour' Vol. 2 ...".

No quotes

Many results must be reviewed.

Unrelated websites show up: Their finest hour

Searching For **Exact Phrases** (2)

- Enclosing the phrase that you are searching for in **quotes** will search for pages that contain only that specific exact phrase.
 - Any variations (e.g. order of words) should be excluded

The screenshot shows a Google search interface. The search bar contains the text "this was their finest hour" enclosed in double quotes. Below the search bar, the search results are displayed. The first result is from Wikipedia, titled "This was their finest hour - Wikipedia, the free encyclopedia". The second result is from HistoryPlace, titled "Winston Churchill Speech - Their Finest Hour". The third result is an audio file titled "Audio: Winston Churchill's 'This Was Their Finest Hour' Speech". The fourth result is a YouTube video titled "YouTube - Winston Churchill - This Was Their Finest Hour".

The desired phrased enclosed quotation marks.

Fewer but more relevant results show up

Searching **Exact Phrases**: Advanced Search

Advanced Search

Find pages with...

all these words:

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from: to

No other combinations are possible (same as using quotes)

Words That Are Commonly Ignored By Google

- **Stop words** are ignored by search engines such as Google:
 - **Common** words e.g. 'the', 'a', 'to', 'in', 'I'...
 - **Reserved** words e.g. 'OR';
- The search engine can be forced to **include the stop words**:
 1. Use **quotes**
 best places to eat in Calgary
 Vs.
 "best places to eat in Calgary"
 2. Use the **'plus' operator**. (Not available after Google+ came out)
 Star Wars I
 Vs.
 Star Wars +I

What If **More Than One Word** Can Be Used?

- You only remember a part of a phrase and there is *more than one way in which the phrase may be completed*
- Example¹:
 - The world's longest *runway*
 - The world's longest *undefended border*
 - The world's longest *beard*
 - Etc.
- The wildcard operator ***** allows *one or more words* to be substituted for the 'star' or 'asterisk'
- Example:
 - "The world's longest *****"

¹ Example from: <https://support.google.com/websearch/answer/2466433?hl=en>

Using Multiple Wildcards

- Examples:
 - a funny * happened on the * to the *¹
 - Brad Pitt played the character * in *

¹ From: <https://www.lifewire.com/search-using-wildcards-google-1616504>

Searching A Range

- Searching numerical values within a certain min – max range
- Range operator .. (multiple dots)
- Example:

Qatar History 2000..2009

laptop \$300..\$500 canada

Laptops & MacBooks | Best Buy Canada

<https://m.bestbuy.ca> > Home > Computers & Tablets > Laptops & MacBooks ▾

Best Buy Canada has great deals and sales on laptops & MacBooks - plus get free* shipping on all orders over \$35! ... SAVE \$300 ... \$339 \$339.00. SAVE \$260. Marketplace seller. ASUS ZenBook 14" Laptop - Grey (Intel Core i5-8250U ...

...

Laptop Deals - Laptop Deals | Dell Canada

<https://deals.dell.com/en-ca/work> ▾

Dell's Small Business Laptop Deals, Desktop & Server Deals. Get huge savings on ... Shop More Laptops ... \$449.51 (43% off). Dell Price ... \$449.51 (41% off).

Range Searching: Advanced Search

Find pages with...

all these words:

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from: to

Search criteria

Numerical range (same as ..)

Searching Among Alternatives

- Use the **OR** operator
- Normally when a word is typed into the search box Google will try to find web pages that include **all** of those words.
- Example (searches for all words):
 - *<First word> <Second word>* (There is an implicit AND, but there is no 'AND' operator with Google)
 - cute wallpapers cats dogs
- Example (searches include alternatives):
 - cute wallpapers cats **OR** dogs
 - “Bruce Lee” **OR** “Little Dragon” **OR** “Lee Siu Lung”
 - “Wayne Gretzky” **OR** “The Great One” **OR** “Number 99” **OR** “Number ninety nine”

Searching Among **Alternatives** (2)

- Note: Google is case sensitive in this situation! (OR must be upper case in order to search for alternatives).
- The following searches are not identical!

To be or not to be

Vs.

To be **OR** not to be

Example: Multiple Search Terms (Default Is **AND**)

The screenshot shows a Google search for "bruce lee" "little dragon". The search bar contains the query. Below the search bar, the results are displayed. The first result is "Bruce Lee - Wikipedia" with a URL and a brief description. Below this, there is a section for "Images for 'bruce lee' 'little dragon'" showing a grid of images. Further down, there are two YouTube video results: "Little Dragon Tribute : Bruce Lee - YouTube" and "Bruce Lee: The Little Dragon Ryusei (Nunchaku Performance ...".

Example: Multiple Search Terms (“OR”)

"bruce lee" OR "little dragon"

All Images Videos News Books More Search tools

About 19,600,000 results (0.50 seconds)

Bruce Lee - Wikipedia
https://en.wikipedia.org/wiki/Bruce_Lee
 Lee Jun-fan known professionally as **Bruce Lee**, was a Hong Kong and American actor, martial ... a student name while he was attending La Salle College, and his Chinese screen name Li Xiaolong (李小龍; Xiaolong means "**little dragon**").
 Children: **Brandon Lee** (1965–93); **Shannon L...** Years active: 1950–1973
 Origin: Hong Kong Parents: **Lee Hoi-chuen** (1901–65); Grace Ho ...

Little Dragon - Wikipedia
https://en.wikipedia.org/wiki/Little_Dragon
Little Dragon are a Swedish electronic music band from Gothenburg, formed in 1996. The band consists of Yukimi Nagano (vocals, percussion), Erik Bodin ...
 Genres: **Trip hop**, **downtempo**, **synthpop**, **indiet...** Members: **Yukimi Nagano**; Erik Bodin; Fredrik ...
 Labels: **Off the Wall**, **Peacefrog**, **JVC Victor**, **Be...** Origin: **Gothenburg**, Sweden

Bruce Lee (@brucelee) | Twitter
<https://twitter.com/brucelee>

3 hours ago - [View on Twitter](#) 2 days ago - [View on Twitter](#)

Here's how my father (**Bruce Lee**) continues to inspire me and others to innovate. Article I wrote for @FastCompany bit.ly/2g72F0q

Ok, Y'all! 12 hours left for some great deals in the **Bruce Lee Store** - bit.ly/CBMON pic.twitter.com/xSmoibEBG...

Example: Multiple Search Terms, OR - No Caps

"bruce lee" or "little dragon"

All Images Videos News Shopping More Search tools

About 125,000 results (0.97 seconds)

Bruce Lee - Wikipedia
https://en.wikipedia.org/wiki/Bruce_Lee
 Lee Jun-fan known professionally as **Bruce Lee**, was a Hong Kong and American actor, martial ... a student name while he was attending La Salle College, and his Chinese screen name Li Xiaolong (李小龍; Xiaolong means "**little dragon**").
Cerebral edema · **Filmography** · **Bruce Lee Library** · **The Legend of Bruce Lee**

Little Dragon Tribute: Bruce Lee - YouTube
<https://www.youtube.com/watch?v=ioN3DBzFjmw>
 Jul 2, 2007 - Uploaded by JetWahLee
 Tribute music video with clips of the Founder and Master of Jeet Kune Do and his family. Soundtrack from the ...

Images for "bruce lee" or "little dragon" Report images

小龍 Bruce Lee 李小龍 Little Dragon

Searching **Alternatives**: Advanced Search

Find web pages that have...

all these words:

this exact wording or phrase:

one or more of these words: OR OR

But don't show pages that have...

any of these unwanted words:

Need more tools?

Results per page:

Language:

File type:

Search within a site or domain:

(e.g. youtube.com, .edu)

[Date, usage rights, numeric range, and more](#)

All words that **must** appear same as "AND"

One or more of these words **can** appear (same as "OR")

Using 'OR': Exceptions¹

- Google was designed to approximate how people think and behave when searching for information.
- Consequently exceptions to the rules are sometimes made.
- Example²:
 What you tell the Google: "For better" OR "for worse"
 What Google looks for: "For better or for worse"

¹ From <http://www.google.com/support/websearch>

² Google and other search engines may automatically assume you are looking for the Lynn Johnson comic strip (<https://www.fhorfw.com/>) when you enter this phrase.

Excluding Words

- Return search results excluding (or “not including” specified words)
- There may be times when you want Google to exclude from results certain words or phrases.
- This can be done with the **subtraction operator** (subtract the words that follow the operator from search results).
- Example:
 “James Tam”
 Vs.
 “James Tam” -Calgary
- An alternate approach is to use the **‘NOT’** operator
 “James Tam” **NOT** Calgary

Excluding Words: Advanced Search

Find pages with...

all these words:

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from:

 to

Exact
search
phrase

Excluded
word (same
as -, NOT

Example Results: AND, OR, Subtraction (NOT)

Search phrase	Operator	~num. results
"james tam"		63,200
"james tam" -"computer science"	NOT	49,300
"james tam" AND "computer science"	AND	13,400
"james tam" OR "computer science"	OR	229,000,000

Site Specific Searches

- Useful when a webpage is large and/or not well organized:
 - Searching the current webpage
 - Searching the entire site (and only that site)

Searching The Currently Viewed Web Page

Find on page × 1 of 1 < > Options ▾

Go to the faculty page for [James Tam](#) Return to the CPSC 203 web

CPSC 203 Course page: fall 2018

Attention:

Imposed budget cuts required changes to this course. There will no longer be paid Teaching Assistants teach lab. (There will however be Teaching Assistants who staff the help desk for this course: [The 203 Continuous](#) provide additional lecture time to make up a bit for lab time that was removed. Also the use of MY-IT lab (if tutorials have been removed, some of the skills that students found more challenging (i.e. 'hard') have also been presented in a simpler form (absolute and relative cell references in Excel, nested-IF and Do-While constructs were dropped a side effect is that there's now an opportunity to cover some topics in greater depth (such as include the use of MS-Word. Overall the redesigned course was still created to be practical rather than theoretical.

If you want determine if the redesigned course is for you here is a rough outline of [skills](#) in Word and Excel :

Administrative information

- Contact information for James Tam
 - Office: ICT 707
 - Office hours: Monday & Tuesday, 3:00 - 3:50 PM
 - Email: tam@ucalgary.ca
 - Instructor schedule for fall 2018 [schedule](#)
- Additional help: [The 203 Continuous Tutorial or the "CT"](#)
 - CT schedule (commence the week of Sept 9 - 15, work schedule posted sometime at the start of
 - If you don't have your own portable computer with Office on it **when you go to the CT** make you are working on an assignment. That's because you won't be able to login to the computers located. (The Windows machines are reserved for CPSC students in higher level courses)
- Course [textbooks](#)
 - "Computer Science Chop Suey! (Lite Edition): Computer and Software Fundamentals, I

<CTRL>-<F>
(Edge, IE,
Firefox, Opera)

Searching One Website

- Involves searching one entire site (and *not just the page* from the site that is currently loaded into the web browser). Results from other sites will not be shown.

– Use the 'site' keyword

- Example:

Search only the University of Calgary website for the desired text

"vba" site:www.ucalgary.ca

Results are only from the University of Calgary website

[MSOffice update | News & Events | University of Calgary](#)

www.ucalgary.ca/news/utoday/jan20-09/MSOffice

Jan 20, 2009 - These include: Excel Levels 1,2,3, and Excel Macros and VBA; Word 1, 2, and 3; PowerPoint 1 and 2; Access 1, 2, and Access Macros and VBA ...

[University of Calgary Continuing Education](#)

www.ucalgary.ca/cted/campaign2013/201501-newsletter.html

Microsoft Macros and VBA Level 1, Feb 4 ICT 427, Main Campus. Sketching Interiors Feb 4 INT 114, Main Campus. Procurement and Contract Management

[Co-op & Internship Employer Testimonials | Faculty of Science ...](#)

www.ucalgary.ca/science/undergraduate/co_op_internship/employer_testimonials

In return the students gain an enormous amount of knowledge in Oil & Gas, data management, learn many technologies that we use such as C/C++, VBA, ...

Searching One Website: Advanced Search

Find pages with...

all these words:

this exact word or phrase: ← Information sought

any of these words:

none of these words:

numbers ranging from: to

Then narrow your results by...

language:

region:

last update:

site or domain: ← Site being searched (same as 'site')

Online Documentation: Google Operators

- (Last accessed Jan 2020)
 - <https://support.google.com/websearch/answer/2466433?hl=en>

Other Search Websites: Google Comparison

- Google (Alphabet)
 - Overall the most frequently used search site (~75% - 95% searches occur via Googles)
 - Pros (Google)
 - Text search:
 - Now: generally good
 - Past: clearly superior to similar sites
 - Maps/geographical – can't be beat especially with extensive street and satellite views
 - Bing: rotating '360' degree street side view (not the same experience)
 - Cons (Google)
 - Complaints about biases in ranking e.g. competitors to Google are ranked lower
 - Privacy/tracking issues (may be more than you think, not just 'ads')

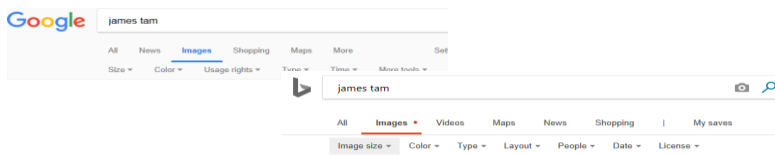


Other Search Websites: Google Comparison

- Cons (Google continued))
 - Privacy/tracking issues (may be more than you think, not just 'ads')
 - Example (location and time map):
 - <https://www.cnn.com/2017/11/20/what-does-google-know-about-me.html>
 - “Why Google’s Spying on User Data Is Worse than the NSA’s”
 - https://www.huffpost.com/entry/why-googles-spying-on-use_b_3530296

Other Search Sites: Microsoft Bing¹

- www.bing.com
- The results from text searches (e.g. “Who will win the Stanley cup” +2019) are often comparable to Google (some claim Bing is greatly superior)
- The search tabs (e.g. images) provide similar search parameters

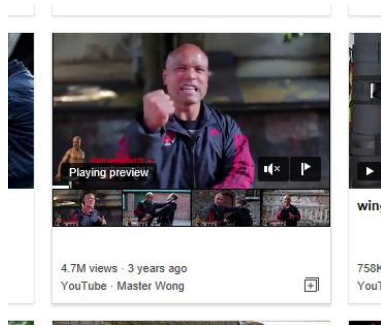


1 References (Accessed Sept 2018)

- <http://blogs.cornell.edu/info2040/2016/10/17/bing-vs-google-seo-and-search-algorithms/>
- <https://www.pcworld.com/article/2685215/websites/the-4-reasons-i-switched-from-google-to-bing.html>
- <https://www.cnet.com/news/so-i-put-google-and-bing-in-the-ring-guess-who-won/>
- <https://help.bing.microsoft.com/#apex/18/en-US/10001/-1>

Other Search Sites: Bing (2)

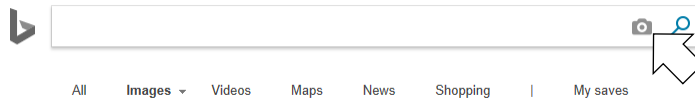
- Bing video: includes a ‘preview’ feature of videos



- Google video: includes a visual ‘closed captioned’ search criteria

Other Search Sites: Image-Based Searches (Reverse Image Searches)

- Yandex: www.yandex.com
 - Largest technology company and largest search website in the Russian Federation¹
 - It's biggest 'claim to fame' is the quality of it's image-based searches
 - Image-based search (reverse image search): Instead of typing text criteria when looking for pictures online you can upload a picture and the search website



- Other search websites also have this feature (e.g. Google, Bing, TinEye etc.) but the results may not as useful.

¹ ["Yandex, Russia's biggest technology company, celebrates 20 years". The Economist. September 30, 2017.](#)

Student Discussion

- Why/when would you use the image-based search feature?
- Are there any drawbacks/personal security issues (current or future) for websites that include image-based searches as a feature?

Google's Image-Based Search

- Reference (last accessed Sept 2018)
 - <https://support.google.com/websearch/answer/1325808?hl=en>
 - **“How reverse image search works**
 - When you search using an image, your search results may include:
 - Similar images
 - Sites that include the image
 - Other sizes of the image you searched for”

Privacy And Web Searches

- Many search sites tracks your searches - wired.com
 - “Google saves all your searches”
 - “Google records what you say every time you speak to it”
 - “Google tracks and records your location”
- It should be possible to remove the stored information but you have to take the time to learn how to do it (opt-in by default is the norm)
- What about “private browsing” modes provided in web browsers
 - It prevents information being stored on your local computer
 - That is, it prevents *other users of that computer* from seeing what you've done, what sites that you've been to

References

1. <https://www.wired.co.uk/article/google-history-search-tracking-data-how-to-delete>
2. <https://www.cnet.com/how-to/how-to-prevent-google-from-tracking-you/>

Privacy Via VPNs (Virtual Private Network)

- Running a VPN during your Internet connection can increase your security.
- A VPN can also help to make your searches private.
 - The VPN encrypts the searches so that intermediaries cannot see your search information (not even your ISP – although they will be able to detect that you are using a VPN).
 - If you are logged into your Google account while performing Google searches then your search history will still be available to Google.

Private Search Websites

- Private search websites claim that none of search information is retained.
- Example: Duckduckgo.com
 - Description (from their website)
 - “We don’t store your personal information”
 - “We don’t follow you around with ads”

Finding And Evaluating Information

- This section is crafted for students who need to conduct research for an undergraduate course e.g., writing a paper
 - But the principles can be applied when researching information for personal reasons because it may improve the quality of the results (e.g., “Are there technical reasons as to why a MAC is any more or less secure than a Windows-PC?”)
- Finding: Where to look for information
- Evaluating: Determining the quality of information?

Finding Information

- When conducting formal research (or even research for undergraduate courses) information sources should be evaluated for quality
 - Not all sources of information are equal in terms quality.
 - Contrast: a private individual’s personal blog (opinion) vs. a website containing the current research being conducted by the experts in a particular field.
- Where to start?
 - Check with your course instructor: what level of research is expected?
 - Books
 - Journals and conference proceedings (may be too much for undergraduate courses)
 - Online: websites

Journals And Conference Proceedings

- JT: for most undergrad courses you would probably look at journals/conferences for 5xx level course (if at all)
- Publications that describe the latest theories and research produced by domain experts
- The quality of publications can vary
 - Which ones are at least reasonably good ones? Start with the instructor's publication list and look at the journals and conferences in which this person has published.

Journals And Conference Proceedings (2)

- Overall the quality of the information is generally good
- Since it is written by 'experts' for 'experts' it may be difficult for the typical student to read and understand
- Examples of good conferences (in case you're curious):
 - <http://www.sigchi.org/conferences/> "User-friendly technology"
 - <http://cscw.acm.org/> "Technology to support groups"

Books

- Books: First look at the intended audience
 - General population books: with no background knowledge in the domain?
 - e.g., “A brief history of time” by Stephen Hawking
 - Probably too rudimentary for use in post-secondary courses.
 - Students: high school or post-secondary textbook
 - May be at an appropriate level of detail (for the latter category) if you just want general knowledge of a topic (e.g., instead of taking a course)
 - Probably not specialized enough if you need to write a detailed term paper for a course
 - e.g., you are taking CPSC 203 there is a brief hardware introduction but the introduction is not sufficient if you need to write a paper on the specific hardware needed for high-end gaming computers

Online: Websites

- Even more than the other sources, websites vary greatly in quality
 - The publishers of conference may host websites describing the latest research conducted by the experts
 - On the other hand: anyone can make their own website about a particular topic
- Some things to keep in mind when evaluating the quality of a website:
 - Who is the author:
 - Widely regarded expert in the field (but some experts write about other areas)
 - Industry expert (which field, is it similar to the one described in the website)
 - Does the person have any apparent conflicts or agendas e.g., a CEO of a computer manufacturing company writing a review of laptops (sometimes affiliations are not so obvious)
 - <https://www.quora.com/What-does-Google-know-about-me/answer/Gabriel-Weinberg>
 - Are points backed by facts? Are those facts citing reputable sources?
 - Some present opinions as facts.

Online: Websites (2)

- Who is the intended audience of the website (Will you be able to use the information)
 - Expert researchers? (Example: conference/journal papers)
 - General population? (Example: News outlet, specialized magazine)
 - Combination? E.g., www.mayoclinic.org, <http://www.hopkinsmedicine.org>
- If the content is produced by a university or reputable research group then it's probably *correct*
 - E.g., Mayo clinic, Johns Hopkins
 - But may or may not be targeted specifically to a 'general' audience and be of insufficient depth for your research
- In general **use websites with a strong degree of a caution.**

Wikipedia

- “**Wikipedia** is a collaboratively edited, multilingual, free Internet encyclopedia...” – from www.wikipedia.org
- Anyone can contribute
- “Many eyes view it” (and presumably check the quality)
- Question for students: Is this a good quality source of information when researching a topic?
 - Some students: “It’s great I use it everyday” (I’ve even heard this from the occasional post-secondary instructor).
 - Other students (paraphrase): “It’s a waste of time to talk about Wikipedia, *everyone* knows you shouldn’t use stuff from there!”

Wikipedia (2)

- Many ‘eyes’ view but are those the ‘right eyes’
 - Some topics require expert knowledge e.g., ‘Rocket science’
- Anyone can edit:
 - There is no guarantee that the experts in the area will be viewing, let alone actively editing Wikipedia documents
 - Furthermore the document that you view one day may not be the same one that you view on another day
 - Side note: Actively study the history of changes of a document and compare differences?
 - Subject to bias - extreme cases of “vandalism” has lead to “lock downs”
 - Yes files can be secured (locked) from further edits but consider what’s the point of a wiki (anyone on the web can edit)

Using Wikipedia

- Similar to regular encyclopedia or perhaps a newspaper article it’s a distillation of different sources of information.
 - Generally it is not accepted as a direct primary source (don’t directly cite a Wikipedia article in your research paper).
- It may be a **starting point** to find good sources of information.
 - You may be use the sources listed in Wikipedia references to learn about topics and to list in your citations.
- Example: “Human-Computer interaction”

Footnotes [edit]

1. [^] Card, Stuart K.; Thomas P. Moran; Allen Newell (July 1980). "The keystroke-level model for user performance time with interactive systems". *Communications of the ACM* 23 (7): 396–410. doi:10.1145/358886.358895 g.
2. [^] Carlisle, James H. (June 1976). "Evaluating the impact of office automation on top management communication". *Proceedings of the June 7–10, 1976, National Computer Conference and Exposition*. pp. 611–616. doi:10.1145/1499799.1499885 g. "Use of 'human-computer interaction' appears in references"
3. [^] ^{*} ^{*} ^{*} Hewlett-Packard, Card, Carey, Gasen, Martel, Perlmán, Strong, Verplanck. "ACM SIGCHI Curricula for Human-Computer Interaction" g. ACM SIGCHI. Retrieved 15 July 2014.

Wikipedia cites a good research conference (usability “user friendly” technology)

Using The University Library



- Services provided for students:
 - From the UC library website, formerly it was <http://library.ucalgary.ca/student-support>)
 - “As a student attending the University of Calgary, you have access to the books, journals and online resources of a major research institution. [Your subject librarians](#) are available for [research assistance](#) as well.
 - Your University of Calgary [ONEcard](#) is your library card, and gives students the following privileges:
 - Borrowing books with a loan period of two weeks for undergraduate students and a term loan for graduate students
 - Interlibrary loan
 - Off-campus access to Library Research Databases”

Online Web Search Without The Library

- The general Internet user does not have a license to access many good online resources.
- After finding the publisher of the article: Journal of American Medical Association you must pay to see the contents.

JAMA Visit the Site

Single Article Purchase:

Association of Nonmyeloablative Hematopoietic Stem Cell Transplantation With Neurological Disability in Patients With Relapsing-Remitting Multiple Sclerosis

Hematopoietic Stem Cell Transplantation for Multiple Sclerosis

Burt RK, Balabanov R, Han X, et al.
 JAMA. 2015;313(3):275-284.
 Published online January 20, 2015

Select Pricing Criteria:

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 Subscriber: **Other Profession**
 Subscription: **24 Hour Access**


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The University Library: Online Resources

- The publications of many journals, conference proceedings, online books can be accessed “for free” (licensed) through the university portal:
 - Requires login with the UC login credentials.
 - Combine the library licensing with an online web search:
- Use regular search websites to find the relevant paper.
 - E.g., “Direct Stimulation of Angiotensin II Type 2 Receptor Initiated After Stroke Ameliorates Ischemic Brain Damage” – found via Google scholar
- Then access the content of the paper through the university portal

ARTICLES & BOOK CHAPTERS

Association of Nonmyeloablative Hematopoietic Stem Cell Transplantation With Neurological Disability in Patients With Relapsing-Remitting Multiple Sclerosis
 Arnaudovic, Indira; Spahovic, Dzemila; Quigley, Kathleen; Oliveira, Maria Carolina; Futterer, Stephen
 JAMA Jan/2015, Volume 313, Issue 3, pp. 275 - 284
 Journal Article 

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After This Section You Should Now Know

- Some factors that can determine the ranking of search results
- Techniques for more effective web searches using Google:
 - Searching for exact phrases: using quotes
 - How to include “stop words” in searches: quotes
 - How to use the wildcard: *
 - Searching ranges: . .
 - Searching for alternates: OR
 - Excluding words and phrases: - (subtraction operator)
 - Conducting site specific searches:
 - Finding content within the webpage currently viewed: ‘find in page’
 - Searching for content within a particular website: site

After This Section You Should Now Know (2)

- Some of the strengths of other search websites as compared to Google: Bing, Yandex, Duckduckgo.
- How to evaluate the quality of information: journals/conferences, books, websites
- Examples of some scholarly websites
- How the university library can complete online searches

Images

- “Unless otherwise indicated, all images were produced by James Tam

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