



Welcome to CSE 440/441/540

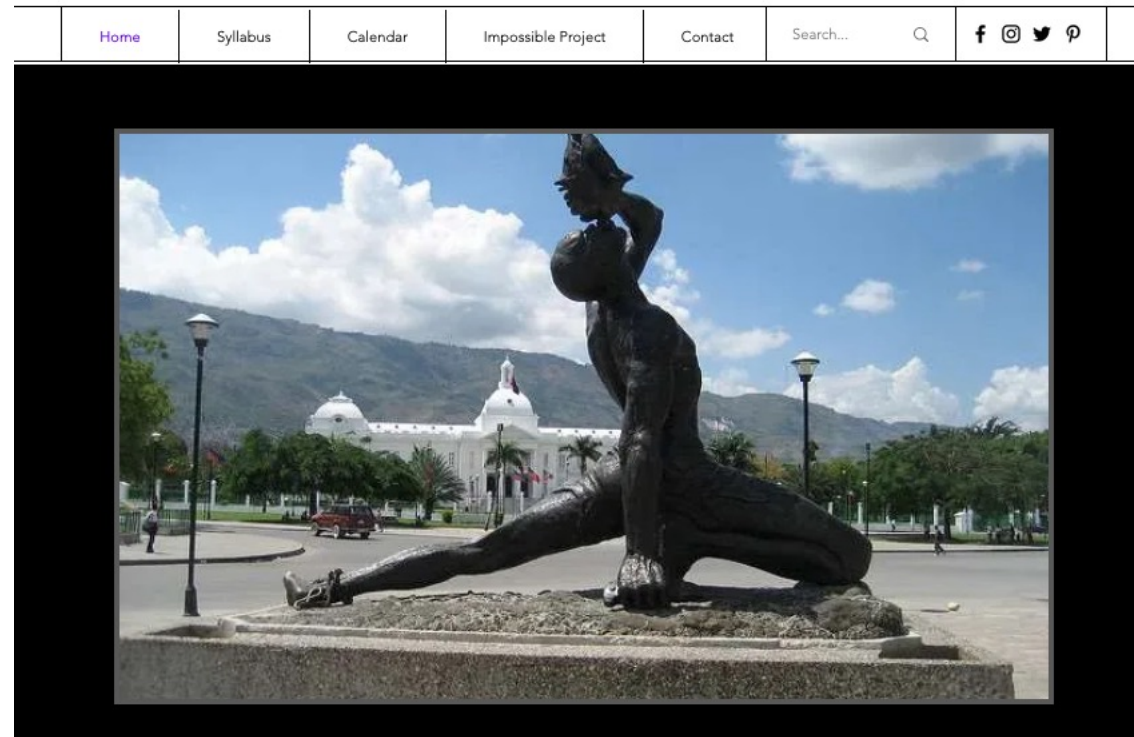
ML and Society

In Collaboration with

Rage Against the Machine
(HIS 419/500)

The course is in collaboration with...

Rage Against the Machine



Dr. Dalia Muller

IMPOSSIBLE project

THINKING AT THE LIMITS
OF THE POSSIBLE,
TOGETHER.

SCHOLAR • CREATOR • FACILITATOR

I am the child of racial, cultural and linguistic crossroads, fitting everywhere and nowhere at once.

I am a scholar whose work strains against boundedness, seeking always to transgress.

I am an educator who knows that I am not "the teacher,"

*and I am an inhabitant of this world who understands that justice work,
as a matter of everyday practice*

requires a degree of bravery, a level of creativity, and a depth of collective work that is difficult to sustain.

It is for this reason that I founded the [Impossible Project](#). The mission of the Impossible Project is to foment, support and sustain the co-creation of transformative learning experiences that empower students to imagine just futures for our world and planet, and call those futures into being.



Introduction format

Preferred Name

One very boring thing about you

Why did you pick this class? Be honest!

What do you know about ML? Be honest!

What do you hope to learn in this course?

I'll go first

Atri

This is my 16th year at UB

Because I'm teaching the course

Actually not much (I can fake it though!)

Hope to get fresh perspectives from y'all!

Kenny next...



Akash

Kiran

Your turn

Preferred Name

One very boring thing about you

Why did you pick this class? Be honest!

What do you know about ML? Be honest!

What do you hope to learn in this course?

Our office hours

Kenny

Wednesdays: 11:30-12:20pm (335 Davis)

Atri

Fridays: 3:00-3:50pm (319 Davis)

(There'll be OH this week)

Things to remember

ATTEND, SUBMIT ALL THINGS ON TIME!

DO NOT CHEAT!

READ CAREFULLY!

Take care of yourself!

Be respectful of your classmates!

Academic Dishonesty

All your submissions must be your own work

Penalty:

Minimum: An **grade reduction in course**

Possible: **F** (or higher penalty) if warranted

YOUR responsibility to know what is cheating, plagiarism etc.

If not sure, come talk to me

Excuses like “I have a job,” “This was OK earlier/in my country,” “This course is hard,” etc. **WON’ T WORK**

WE DO NOT HAVE ANY PATIENCE WITH ANY CHEATING :

**YOU WILL GET A GRADE REDUCTION IN THE COURSE
FOR YOUR FIRST MISTAKE**

Accessibility Resources

Information included in the syllabus

In short, let us know and consult with [Accessibility Resources](#)

Preferred Name

If you prefer using name diff from UB records

Let us know and we'll make a note of it.

Critical Campus Resources

Sexual Violence

UB is committed to providing a safe learning environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence and stalking. If you have experienced gender-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), UB has resources to help. This includes academic accommodations, health and counseling services, housing accommodations, helping with legal protective orders, and assistance with reporting the incident to police or other UB officials if you so choose. Please contact UB's Title IX Coordinator at 📞 716-645-2266 for more information. For confidential assistance, you may also contact a Crisis Services Campus Advocate at 📞 716-796-4399.

Mental Health

As a student you may experience a range of issues that can cause barriers to learning or reduce your ability to participate in daily activities. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, health concerns, or unwanted sexual experiences. Counseling, Health Services, and Health Promotion are here to help with these or other issues you may experience. You can learn more about these programs and services by contacting:

Counseling Services

120 Richmond Quad (North Campus), 📞 716-645-2720

Health Services

4350 Maple Road (at Sweet Home Rd.) , 📞 716-829-3316

Health Promotion

114 Student Union (North Campus), 📞 716-645-2837

One Stop-shop for the course

CSE 440/441/540

Syllabus

Piazza

Schedule

Autolab

Homework

Impossible Project ▾

Surveys ▾

RAGE ▾

Bonus Points

Resources ▾

CSE 440/441/540 Spring 2023 Schedule

Spring 2023 schedule for the *ML and Society* course.

<http://www-student.cse.buffalo.edu/~atri/ml-and-soc/spr23/index.html>

Under Construction

This page is still under construction. In particular, nothing here is final while this sign still remains here.

Future Lectures

The topics for lectures in the future are tentative and subject to change.

Legend

 Combined class with Rage Against the Machine (in the usual class room).

 Lecture slides in PDF format.

Three important notes

This is (no longer) an “easy A” course

Make sure you arrive to class on time

8% of your grade is based on week 1 submissions

6% of which is the Homework (due Fri)

CSE 440/441/540

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Bonus Points

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Homework

Due by **5pm, Friday, February 3, 2023.**

Make sure you follow all the [course policies](#).

All submissions should be done via [Autolab](#).

⚠ Under Construction

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Background

Like the [project in this course](#), this course is structured very differently from a typical CSE course. To give y'all a taste of what the future assignments will look like in this course, we decided to add this homework for the first time in the course. We hope that you will work hard on this homework and then decide for yourself whether this course is what you had signed yourself up for or not.

It is perfectly fine if you decide after you do the homework that this course is not for you! We'd rather you make an informed decision before the add/drop day.

! Non-trivial number of points

Instructions are not “suggestions”

! Three (3) page limit (+Appendix)

Your submission should at most **three (3)** pages (*excluding references, and your answer to the Bonus question*). **Do not copy the questions over, just put your numbered responses in. Additionally, use single-spacing with size 12 font and standard margin sizes.** To give a sense of what we are expecting, it is possible to satisfactorily answer the above questions in 2-4 sentences each.

If you need more space you can have an appendix after the references but **we reserve the right to completely ignore the appendix while reading your submission.**

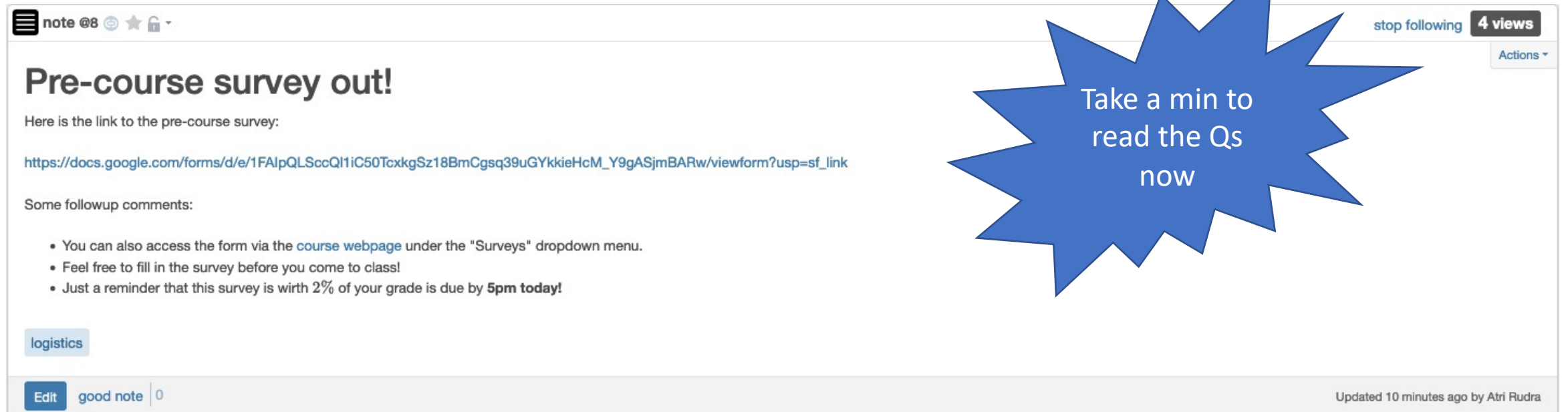
! PDF only please

If Autolab cannot display your file, (irrespective of the reason) then you will get a zero (0) on the entire question.

Autolab might not be able to display files in formats other than PDF (e.g. Word cannot be displayed). **Note that Autolab will "accept" your submission even if you submit non-PDF file, so it is YOUR responsibility to make sure you submit in the correct format.** However, after submission, Autolab will try and display your non-PDF submission and it should give an error message then. Also the file size has to be **at most 3MB.**

The other 2% is the pre-course survey

Due by 5pm TODAY!



The image shows a screenshot of a Google Note interface. At the top left, it says 'note @8' with icons for share, star, and lock. On the top right, there are 'stop following' and '4 views' buttons, and an 'Actions' dropdown menu. The main title of the note is 'Pre-course survey out!'. Below the title, it says 'Here is the link to the pre-course survey:' followed by a Google Forms link: https://docs.google.com/forms/d/e/1FAIpQLSccQI1iC50TcxkgSz18BmCgsq39uGYkkieHcM_Y9gASjmBARw/viewform?usp=sf_link. Below the link, it says 'Some followup comments:' followed by a bulleted list:

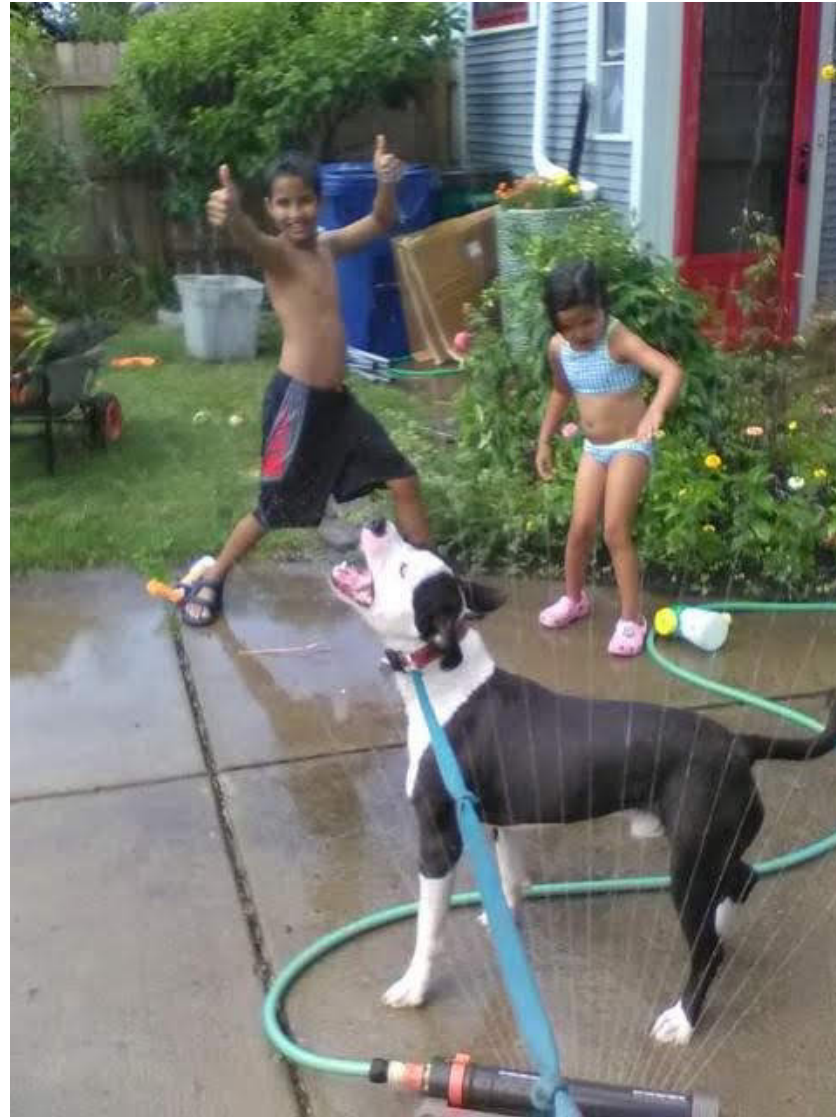
- You can also access the form via the [course webpage](#) under the "Surveys" dropdown menu.
- Feel free to fill in the survey before you come to class!
- Just a reminder that this survey is worth 2% of your grade is due by **5pm today!**

 At the bottom left, there is a 'logistics' tag. At the bottom right, it says 'Updated 10 minutes ago by Atri Rudra'. A large blue starburst graphic is overlaid on the right side of the note, containing the text 'Take a min to read the Qs now'.

Questions/Comments?

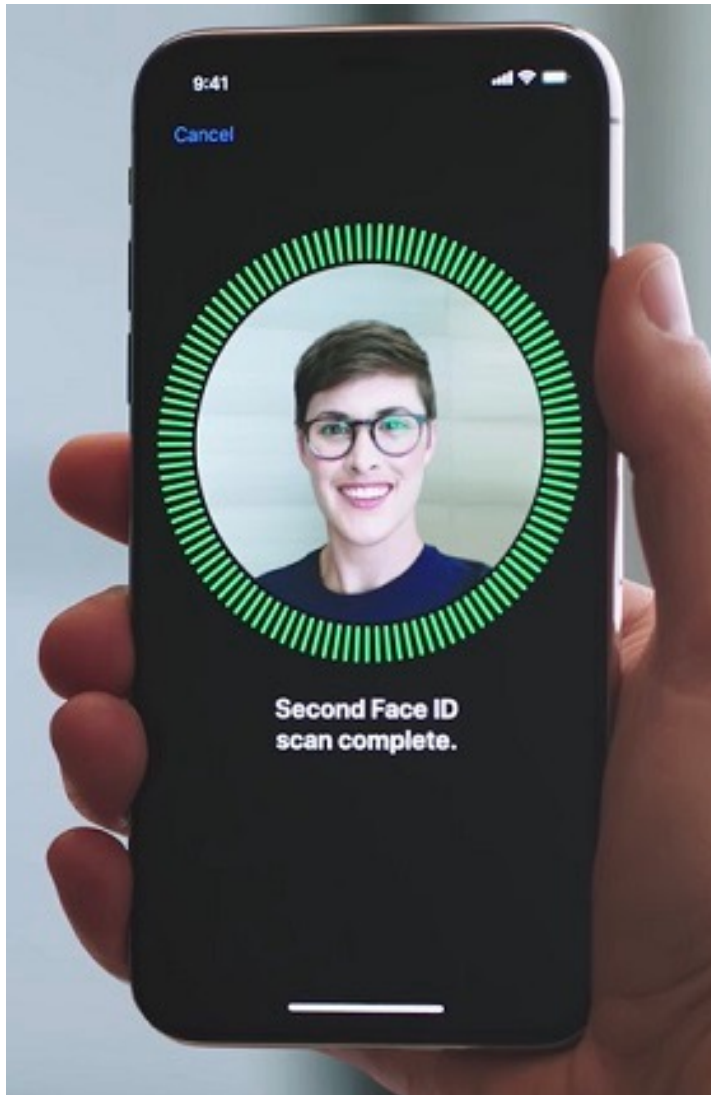


More course logistics in 2nd half of today

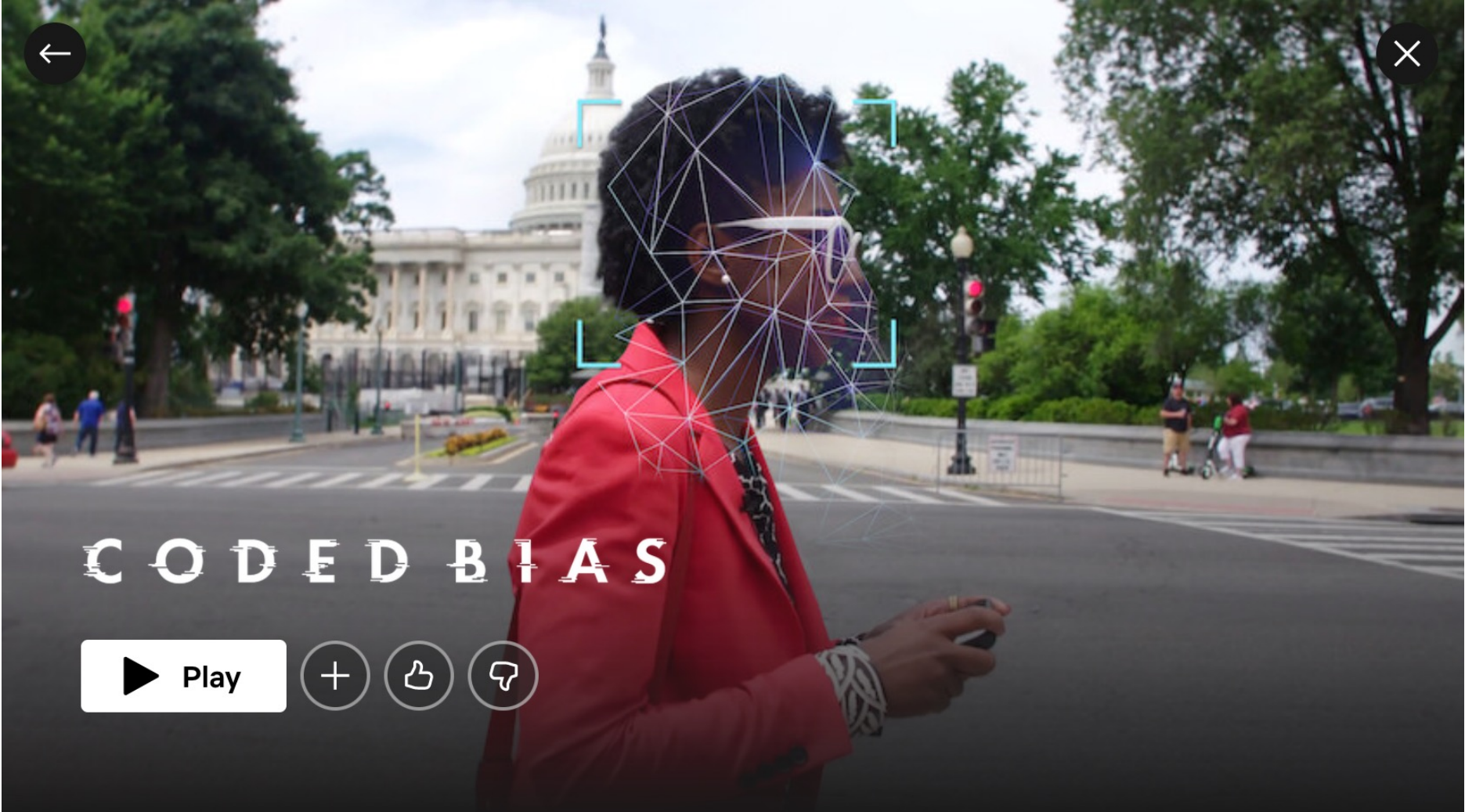


Why this course?









C O D E D B I A S

 **Play**   

2020 TV-MA 1h 25m HD

This documentary investigates the bias in algorithms after M.I.T. Media Lab researcher Joy Buolamwini uncovered flaws in facial recognition technology.

Genres: Social & Cultural Docs, Documentary Films, Science & Nature Docs

This movie is: Investigative

One Month, 500,000 Face Scans: How China Is Using A.I. to Profile a Minority

In a major ethical leap for the tech world, Chinese start-ups have built algorithms that the government uses to track members of a largely Muslim minority group.

Flawed Algorithms Are Grading Millions of Students' Essays

Foiled by gibberish and highly susceptible to human bias, automated essay-scoring systems are being increasingly adopted, a Motherboard investigation has found

Research is scarce on the issue of machine scoring bias, partly due to the secrecy of the companies that create these systems. Test scoring vendors closely guard their algorithms, and states are wary of drawing attention to the fact that algorithms, not humans, are grading students' work. Only a

Meanwhile, it tended to underscore African Americans and, at various points, Arabic, Spanish, and Hindi speakers—even after attempts to reconfigure the system to fix the problem.

“The BABEL Generator proved you can have complete incoherence, meaning one sentence had nothing to do with another,” and still receive a high mark from the algorithms.

Slide by Kenny Joseph

A

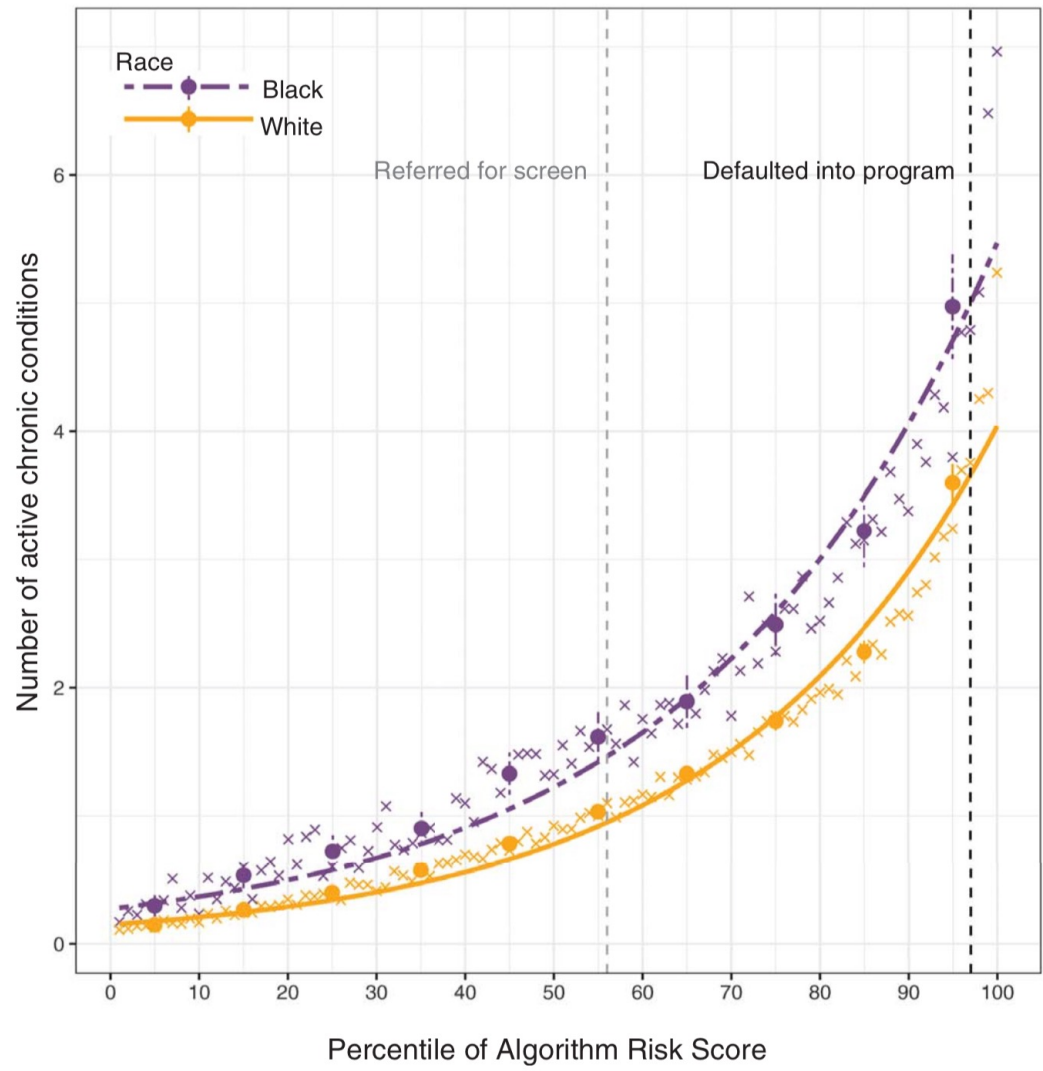


Fig. 1. Number of chronic illnesses versus algorithm-predicted risk, by race. (A) Mean number of chronic conditions by race, plotted against

Slide by Kenny Joseph

Where the Tweets have no name liked



Anna Lauren Hoffmann @annaeveryday · 33m

How it started: How it's going:



1

60

147



Melonie Cope

What's going on? Let's dive in!



There was immediate push-back



Ryan Saavedra ✓

@RealSaavedra



Socialist Rep. Alexandria Ocasio-Cortez (D-NY) claims that algorithms, **which are driven by math,** are racist



♥ 9,455 3:27 AM - Jan 22, 2019



💬 9,204 people are talking about this



Before we go into who is right...

Disagree with what someone SAID **NOT** who you think they ARE



Same principle replace “race” by other topic

Amazon Basics Microwave, Smart microwave, Works with Alexa
by Amazon

★★★★☆ [1,783 customer reviews](#) | [564 answered questions](#)

Price: **\$59.99** ✓prime

AmazonBasics Microwave

Question: [Since you have to stand there to put popcorn or whatever in the microwave, why does it need to be voice controlled?](#)

Answer:

[Redacted Answer]

By Diane Fillmore on November 24, 2018

[See more answers \(25\)](#)

▲
134
votes
▼



Microwave
\$59.99
✓prime

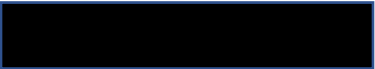
with Dot (Charcoal)
\$109.98
✓prime

with Dot (Heather Gray)
\$109.98
✓prime



WORKS WITH ALEXA

Control this with your device:



[See More](#)

When you disagree with someone

First, pause to see if you understand **WHAT** they are saying

Then, try to understand **WHY** they are saying it

ALWAYS ask for clarifications to make sure you are not missing something

Questions/Comments?



Read the syllabus carefully!

CSE 440/441/540

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Impossible Project ▾

Surveys ▾

RAGE ▾

Bonus Points

Resources ▾

CSE 440/441/540 (Machine Learning and Society) Syllabus

Spring 2023

Mondays and Wednesdays, 10:00-11:20am, [O'Brian](#)  209.

Under Construction

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Please note

It is **your responsibility** to make sure you read and understand the contents of this syllabus. If you have any questions, please contact the instructor.

Academic Integrity

Impossible Project

CSE 440/441/540

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Piazza

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Impossible Project ▾

Surveys ▾

Project Details

Project Details

This page contains all the details related to the ML and Society course project.



Different
expectation from
CSE majors vs
non-majors

Under Construction

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The tldr;

The majority of your grade this semester will be based on your performance on a **group** project. Specifically, your group will collaborate with a student from Dr. Muller's [Rage Against the Machine](#) to tackle the **impossible project of ending white supremacy** during the spring semester of 2023. Working together across disciplines to study and propose new approaches to solving this pressing problem in our society here in Buffalo and globally, you will propose and present your findings for a public live and virtual audience on May 8th, 2023 at the usual class time.

This page contains everything you need to know about this project. **You are responsible for reading this document and being aware of the requirements on it.**

Details galore!

There are **quite a few details** on the project. So please **read the rest of the document very carefully**. If you have any questions, please ask us!

Questions/Comments?



Attendance on Autolab

AUTO LAB

You need to sign in or sign up before continuing.

Autolab Homepage

SIGN IN WITH MYUB

<https://autograder.cse.buffalo.edu/>

This is what you should see when you login

Courses

Current

CSE440/441/540:
ML and Society
(s23)

[COURSE PAGE](#)

CSE445/545:
Coding Theory
(s23)

[COURSE PAGE](#) [GRADE SECTION](#)

You should see a link for attendance

Assignments ---

Attendance

January 30

You need to enter a pass-phrase

What is the pass phrase for today?

I affirm that I have complied with this course's academic integrity policy as defined in the syllabus.

SUBMIT QUERY

Pass-phrase for today: Joy Buolamwini



Fast Company Cover - Most Creative People in Business



Coded Bias Documentary (Netflix/PBS)

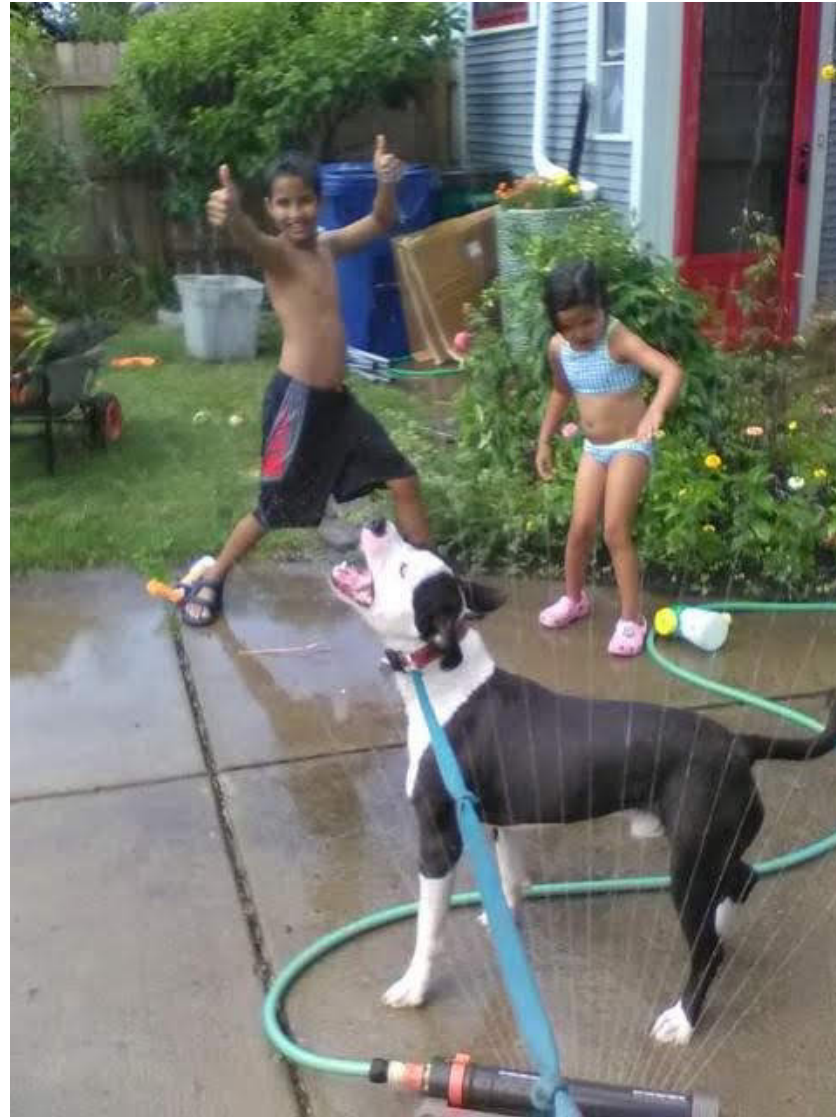


Ted Talk - 1M+ views Fighting Bias in Algorithms



#DecodeTheBias Olay Campaign

Time for a break!



Who does my machine
learning model serve?

How do I know?

**What can I do
about it?**

The CSE 199 Ideal – Get folks to understand...

Computing **for**, **in**, and
ideally, **with** and **by** society

We're past CSE 199 now

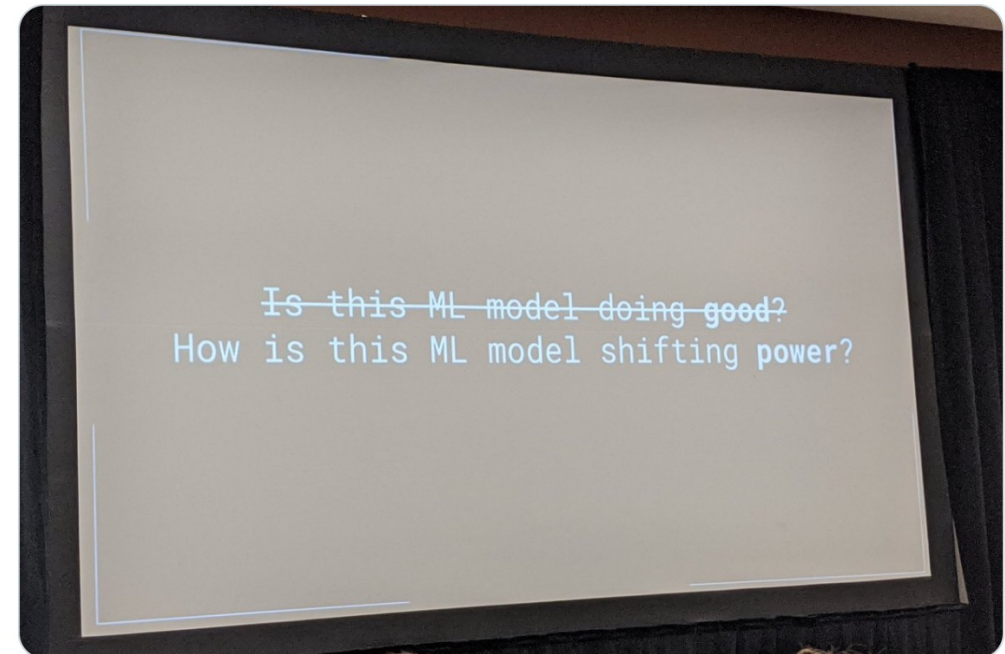
- It will not be sufficient in this course to understand that “ML is biased” or that it can be “used for good”
- We will focus on **why** ML is biased, what “**social good**” means, and how to **really build technology for, in, and with/by society**



Rachel Thomas
@math_rachel

"Is this ML model doing good?" is the wrong question to be asking.

We need to ask: "how is this ML model shifting power?"
@riakall #NeurIPS2019



Slide by Kenny Joseph

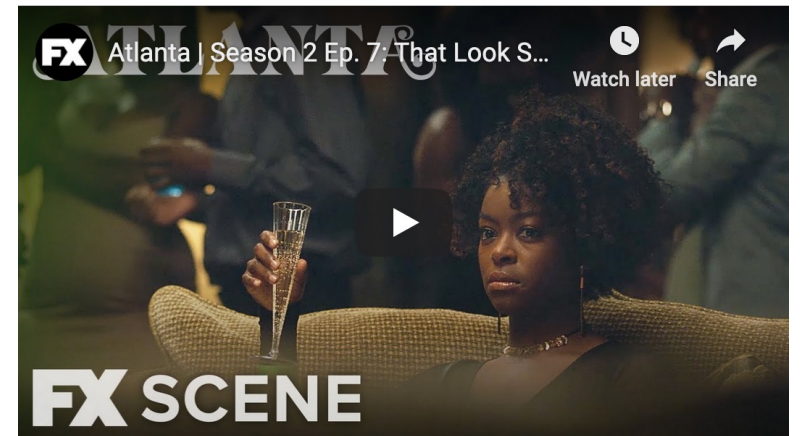
Back to Algorithms and Bias....



Thanks to..



Jenny Korn



Search #1: heroine



🔍 heroine 📷 🔍

My search results

Notice any pattern?

The image shows a Google search for "heroine". The search bar is at the top with "heroine" entered. Below the search bar are navigation tabs for "All", "Images", "News", "Videos", "Shopping", and "More". There are also icons for "Collections" and "SafeSearch".

Below the navigation tabs is a row of suggested filters: wallpaper, beautiful, bollywood, movie, new, name, cute, item, saree, top, actress, stylish, half saree, dress.

The search results are displayed in a grid. The first row includes:

- Chemical structure of Heroin from Wikipedia.
- Another chemical structure of Heroin from Wikipedia.
- Portrait of actress Rashmika Mandanna from timesofindia.indiatimes.com.
- Movie poster for "HEROINE" from Rotten Tomatoes.
- Portrait of actress Rashmika Mandanna from Peakpx.
- Movie poster for "HEROINE" from IMDb.
- Movie poster for "HEROINE" from Amazon.com.
- Portrait of actress Kalyani from Peakpx.

The second row includes:

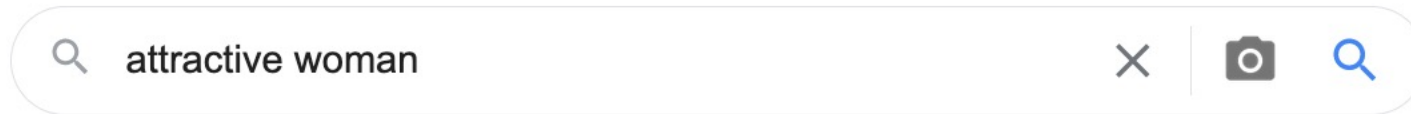
- Medical illustration of Heroin from The Daily Universe.
- Portrait of actress Adipurush Dillyda from CineJosh.
- Movie poster for "HEROINE" from IMDb.
- Portrait of actress MBBS! from Gulte.
- Portrait of actress from Pinterest.
- Portrait of actress Ramya Pandian from Times of India.
- Portrait of actress from Pxfuel.
- Portrait of actress from Telugu Bulletin.
- Portrait of actress KeerthySuresh from Peakpx.

The third row includes:

- Portrait of three actresses from a website.
- Portrait of actress from a website.
- Comparison image of "Heroine" (superhero) and "Heroin" (drug) from a website.
- Portrait of actress from a website.
- Portrait of actress from a website.
- Portrait of actress from a website.
- Portrait of actress from a website.

On the right side, there is a "Related searches" section with suggestions: "beautiful heroine" and "wallpaper heroine".

Search #2: attractive woman



My search results

Notice any pattern?

The image shows a Google search interface for the query "attractive woman". At the top, the Google logo is on the left, and the search bar contains "attractive woman". To the right of the search bar are icons for image search, a magnifying glass, and a settings gear. Below the search bar, navigation tabs include "All", "Images" (which is selected), "Videos", "Shopping", "News", and "More". On the far right, there are icons for "Collections" and "SafeSearch".

Below the navigation tabs is a horizontal scroll bar with filter tags: "body", "middle aged", "cute", "pretty", "swimsuit", "natural", "blonde", "girl", "perfect", "long hair", "thin", "college", "plus size", and "office".

The main content area displays a grid of search results. Each result consists of a thumbnail image and a caption below it. The results include:

- Byrdie: "7 Traits That Make Wome..."
- ShineSheets: "What Do Men Find Attractive I..."
- PsyPost: "borderline personality traits ..."
- Pinterest: "900+ Best Attractive W..."
- ReGain: "What Makes A Woman Attractive? Knowing ..."
- iStock: "Long Hair Wearing Jeans Stoc..."
- Focused Collection: "Attractive woman walkin..."
- New York Post: "Attractive women reveal benefits of ..."
- Bony to Bombshell: "Most Attractive Female Body Compositio..."
- Esquire: "The Most Beautiful Wo..."
- Byrdie: "7 Traits That Make Wo..."
- The Social Man: "Most Attractive Woman ..."
- Imágenes españo...: "Tumblr Mjskrjim Rchw ..."
- The Modern Man: "A Subtle Attraction Technique That ..."
- Quora: "What do extremely attr..."
- WayTooSocial: "Meet Women That Are Attractive"

At the bottom of the page, there is a "Related searches" section with two suggestions:

- pretty attractive woman
- middle aged attractive woman

My SP 22 search results

Notice any difference?

The image shows a Google search interface for the query "attractive woman". The search bar is at the top, with the Google logo on the left and navigation icons on the right. Below the search bar, there are tabs for "All", "Images", "Videos", "News", "Shopping", and "More". The "Images" tab is selected. A horizontal row of filter buttons is visible, including "cute", "natural", "middle aged", "pretty", "plus size", "fit", "office", "thin", "college", "single", "average", "most", "candid", "bra", and "blor". Below the filters, a grid of image results is displayed. Each result consists of a thumbnail image and a caption with a source URL. The images show a variety of women with different features and styles, illustrating the search results for the query.

Google attractive woman

Q All Images Videos News Shopping More Tools Collections SafeSearch

cute natural middle aged pretty plus size fit office thin college single average most candid bra blor

Attractive woman with long hair ...
dissolve.com - In stock

7 Traits That Make Women Mor...
byrdie.com

Portrait Of A Very Attractive Woman ...
istockphoto.com

borderline personality traits ...
psypost.org

Attractive pretty beautiful young...
depositphotos.com

Women Find Attractive In The Perfect Man
bosshunting.com.au

Portrait of attractive and hot woman ...
elements.envato.com

What Do Men Find Attractive I...
shinesheets.com

Sexy Attractive Woman I...
123rf.com

Attractive woman smili...
canstockphoto.com

900+ Attractive Women i...
pinterest.com

beach — resort, young - ...
focusedcollection.com

Dhanurasana Exercise, Bow Pose ...
123rf.com

Most Attractive Woman ...
thesocialman.com

What Makes A Woman Attractive? Knowing ...
regain.us

Search 3: attractive man



🔍 attractive man × 📷 🔍

My search results



attractive man



Q All Images Videos News Shopping More Tools

Collections SafeSearch

- average
- middle aged
- muscular
- cute
- beautiful
- model
- rugged
- tall
- handsome man
- male
- military
- strong
- beach



Style Konsult
How To Be Attractive ...



Business Insider
How Men Can Appear More Attr...



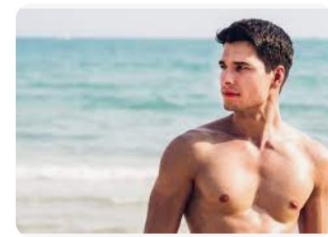
Yahoo Life UK
most handsome man ...



Ashley Weston
Top 6 Habits Of Attractive Men - Ashley ...



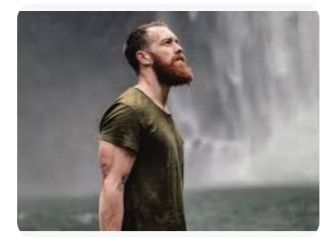
DMARGE
Attractive Men Reveal Struggles Of ...



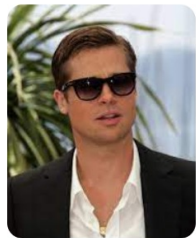
The Good Men Project
How To Be a More Attractive Man - The ...



PairedLife
The 10 Most Attractive ...



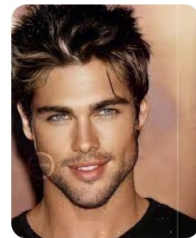
Everyday Health
7 Weird Traits That Make Men Attractiv...



Maxim
20 Ways to Be a More ...



Allure
Does Acting Masculine...



Pinterest
Beautiful men faces, W...



Real Men Real Style
10 Clothing Items That Make A Man M...



Business Insider
How Men Can Appear More Attractive ...



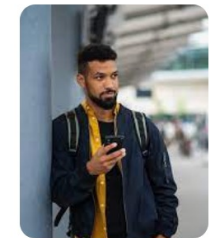
Medium
The Most Attractive Man. A guide f...



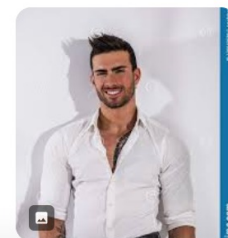
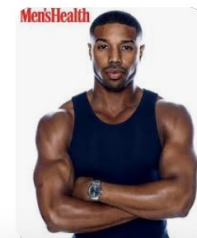
News18
Most Attractive Man ...



The Sun
George Clooney IS the ...



Fatherly
10 Ways To Be A More ...



Related searches

- average attractive man
- attractive man selfie
- middle aged attractive

Questions to ponder

Questions to ponder

Do you think the above result are biased?

If not, why not?

If so,

- What do you think could be the reason for this bias?
- Do you think Google Images is responsible?
- Should Google Images do something to fix the bias?

Search #4: ceo



Search bar containing the text "ceo" and icons for search and image search.

My search results (Spring 2020)

Google 🔍 Sign in

🔍 All 📰 News 🖼️ Images 📖 Books 📺 Videos ⋮ More ⚙️ Settings 🛠️ Tools

business google cartoon snapchat microsoft apple woman desk amazon uber pepsi youtube black facebook starbucks successful twitter salary

A grid of 48 search results for the query 'ceo'. Each result consists of a thumbnail image and a text caption. The results include various types of content: portraits of CEOs, news articles, and informational graphics. Notable results include 'The rise of the next-gen bank CEO', 'McDonald's Fires CEO Over...', and 'Boeing CEO Dennis Muilenburg...'. A 'Related searches' sidebar is visible in the middle of the grid, listing terms like 'cartoon ceo', 'ceo text', and 'desk ceo'. The grid is organized into four rows of 12 items each.

Chief executive officer - Wikipedia

Casey's Anno... businesswire...

What do CEOs do? A CEO ... steverobbins.com

Marriott CEO Arne Sor... chiefexecutive.net

Harvard study: What CEO... cnbc.com

McDonald's Fires CEO Over... forbes.com

How to use 'CEO magic' ... europeanceo.com

Rise of the next-gen bank CEO americanbanker.com

HSBC's Caretaker CEO ... bloomberg.com

Siemens USA CEO say... businessinsider.com

Selective CEO begins the ... insurancebusinessmag.com

You are the CEO of Your Life... personalexcellence.co

CEO Confidence Ticks U... chiefexecutive.net

Meet Our CEO -... stellarairportstor...

Proximus approves CEO app... mobileworldlive.com

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Mike Roman | 3M... 3m.com

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NBCUniversal CEO Steve Bur... adweek.com

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Boeing CEO pushed out a... theverge.com

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Abbott Labs' CEO Is Step... barrons.com

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Not the ideal messenger': Faceb... aljazeera.com

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Gianrico Farrugia, M.D., ... newsnetwork.mayoclinic.org

Wellforce health... bostonglobe.com

Roche - Meet our CEO roche.com

China has become a CEO-level... mckinsey.com

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New Northrop Grumman CEO... fortune.com

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Markus Duesmann to ... audi-mediacenters.com

New CEO at Porsche Korea newsroom.porsche.com

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BMW promotes Oliver Zi... reuters.com

Appointed CE... airbus.com

F5 Networks names new ... geekwire.com

Boeing CEO Dennis Muilenbur... businessinsider.com

My search results (Spring 2022)

Google ceo

Q All News Images Books Videos More Tools

female business google microsoft apple desk amazon uber pepsi black office youtube facebook starbucks abercrombie tesla visiting card salary walmart successful clipart

CEO vs. Owner: Key Differences | Ohio ...
onlinemasters.ohio.edu

What do you do when your CEO doesn't ...
heartofthecustomer.com

Harvard study: What CEOs do all day
cnbc.com

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smartasset.com

You are the CEO of Your Life - Personal ...
personalexcellence.co

CEO Job Description
betterteam.com

11 Habits of Successful CEOs You Should ...
ceotodaymagazine.com

a CEO: Unexpected traits top leaders ...
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Ken Frazier named Chief Executive's ...
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CEO vs. CFO - Overview and Differences ...
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Understanding CEO Leadership Styles ...
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How to Become a CEO: Definition Steps ...
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Uwe Hochgeschurtz will join Opel as new ...
stellantis.com

Role Of Personality In CEO Leadership ...
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Wartime CEOs are not the ideal leaders ...
ft.com

Related searches
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female ceo
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CHIEF EXECUTIVE OFFICER

Replacement CEOs are Women ...
securitymagazine.com

How CEOs can help lead tech...
mckinsey.com

ACI Announces Appointment of Odilon ...
businesswire.com

CEO Who Fired 900 Workers...
forbes.com

LinkedIn CEO Jeff Weiner steps down ...
fortune.com

What is CEO?
computerhope.com

The Next CEO
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Thomas H. Dill and Melissa Duggan

become CEO in an embattled industry ...
foxbusiness.com

5 Signs You're CEO Material | Inc.com
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findlaw.com

What do CEOs do? A CEO Job Description ...
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What Are the Duties of a CEO?
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Hiring a CEO: How Does It Work?
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Women CEOs of the S&P 500
catalyst.org

5 days ago
Inside the Mind of the CEO
strategy-business.com

10 CEOs Reveal Productivity Tips to ...
nextiva.com

My search results (Spring 2023)

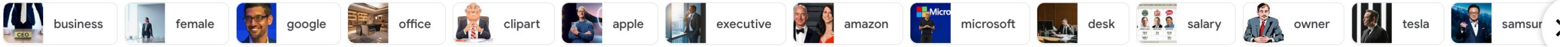
Google

ceo



Q All News Images Videos Books More Tools

Collections SafeSearch



Ohio University
CEO vs. Owner: Key Differences | Ohio ...



CNBC
Google CEO says he hopes to make ...



Betterteam
CEO Job Description



Investopedia
Chief Executive Officer (CEO): What ...



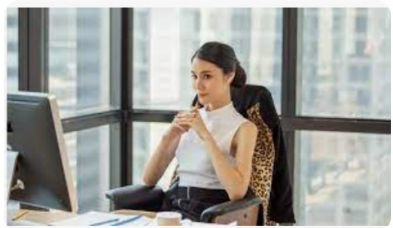
Chief Executive
CEO of the Year



Forbes
7 Personality Traits Every CEO Should Have



The Balance
Chief Executive Officer (CEO) Job ...



Fellow.app
How CEOs Manage Their Time: 11 Pro Tips ...



Entrepreneur
What Are the Duties of a CEO?



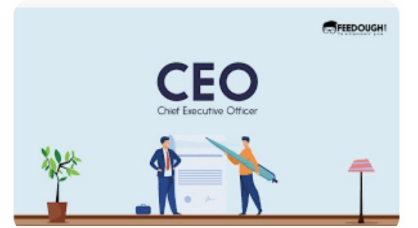
Diligent Corporation
CEO vs. Chairman: Executive Titles and ...



Steve Robbins
What do CEOs do? A CEO Job Description ...



Harvard Business Review
Finding the Right CEO





Feedough
Chief Executive Officer (CEO) ...



Search #5: beautiful woman



My search results (Spring 2020)

Google beautiful woman

Q All Images Videos News Books More Settings Tools

face pretty most beautiful happy chest yoga smiling dark good morning sad happy birthday rich strong top 10 black hair american tattoo unique strikingly blonde hair

Most Beautiful Women In Each Country ...
twentytwowords.com

Science just proved that Bella Hadid is ...
emirateswoman.com

Beautiful Woman Stock Pictures ...
gettyimages.com

Most Beautiful Women of the 21st Century
brightside.me

Woman says she is so beautiful she can ...
indy100.com

Most Beautiful woman...
pinterest.com

Most Beautiful Woman on Earth Mahlagha ...
abawaba.com

720x1280 wallpaper ...
pinterest.com

Bella Hadid is 'world's most beautiful ...
man.com

Being An Incredibly B...
medium.com

Most Beautiful Women in the World 2020 ...
mashtos.com

Beautiful Woman Wallpapers - Top Free ...
wallpaperaccess.com

Engaging Beautiful Woma...
peaks.com

Top 10 Most Beautiful Women in the ...
wonderlist.com

The Most Beautiful W...
listal.com

Most Beautiful Woman
popcrush.com

Volume Shiny Wavy H...
depositphotos.com

Evolution Of The Most Beautiful Women ...
youtube.com

Priyanka Chopra Nam...
ella.com

This Is The Most Beautiful Woman In The ...
tattybetty.com

Young Beautiful Woman...
123rf.com

Super linda 🍷🍷🍷...
pinterest.com

The Most Beautiful W...
esquire.com

Countries With The Most B...
icepop.com

Related searches

- most beautiful beautiful woman
- pretty beautiful woman
- fit beautiful woman

Most Beautiful Woman ...
bustle.com

Most Beautiful Women In Each Country ...
twentytwowords.com

7 Things That Make A Woman Beautiful ...
lifehack.org

Is Sandra Bullock Really the 'Most ...
thedailybeast.com

Most beautiful woman in the world: ...
slate.com

Beautiful woman with healthy body o...
freepik.com

How To Make Beautiful Women Fall For You
waytosocial.com

10 Most Beautiful Women in the Worl...
manofmany.com

Most Beautiful Women of 2019: Top 10 of ...
wonderlist.com

Who is the most beaut...
quora.com

Man is SLAMMED for list of tips on 'how ...
dailymail.co.uk

Priyanka Chopra: The ...
simplest.com

Beautiful Woman Stock Pictures ...
gettyimages.com

The Most Beautiful Women Of ...
esquire.com

Beautiful Woman With Makeup Stock Photo ...
istockphoto.com

Science says this is the most beautiful ...
economictimes.indiatimes.com

Bella Hadid is the Mos...
usmagazine.com

In photos: 9 most beautiful women in ...
gulfnews.com

Science Says Bella H...
revelist.com

Beautiful Woman Pict...
unsplash.com

Beautiful Women Pictures and Wallpapers
thewowstyle.com

Arrogant man who advised wo...
thesun.co.uk

Related searches

- elegant beautiful woman
- most beautiful woman's body in the world
- cute attractive female

What is a beautiful woman? - Quora

other women absolutely despise ...

10 of the most beautiful women from the ...

Liza Soberano beats Selena Gomez, Gal ...

Bella Hadid is the most b...
94.5%
98.1%

Famous for the Most Beau...

Black, white portraits, ...

Most Beautiful Women in the World 2017 ...

Most Beautiful Women in ...

Beautiful Woman Stock Pictures ...

My search results (Spring 2022)

Google

Images Videos Books News More Tools

face portrait smiling sad beauty attractive black hair tattoo perfect simple blonde hair class brown skin fantasy dress morning profile athletic shutterstock female average

The image displays a grid of search results for the query "beautiful woman". Each result consists of a small image and a caption with a source link. The results are organized into rows. The first row contains 10 results, the second row contains 10 results, the third row contains 10 results, the fourth row contains 10 results, the fifth row contains 10 results, and the sixth row contains 10 results. The results include various types of images, such as portraits, full-body shots, and close-ups, representing a wide range of beauty standards and ethnicities. Some results are highlighted with a red border, indicating they are the top results. The search interface includes a search bar at the top, navigation tabs for different content types (Images, Videos, Books, News, More), and a toolbar with various filters and tools. The search results are presented in a clean, grid-like layout, typical of Google's search engine interface.

Most Beautiful Woman ... lofficelisa.com

Beautiful girl face, Brun... pinterest.com

500,000+ Best Beautiful W... pexels.com

550+ Beautiful Woman Pictures ... unsplash.com

The Most Beautiful Wom... esquire.com

Most Beautiful Woman ... glamour.com

8,522,500 Beautiful Woman Photos - Free ... dreamstime.com

The Top Twenty Most Beautiful Women of ... brightside.me

Most Beautiful woman ... nypost.com

Priyanka Chopra: The Worl... simplemost.com

Beautiful Woman Long ... shutterstock.com

Priyanka Chopra Named ... elle.com

Countries With The Most Beau... pinterest.com

most beautiful woman in the world ... economictimes.indiatimes.com

Israeli model ranked world's most ... epress.org

Most Beautiful Women ... newsmeter.in

Beautiful Hair, Beautif... dreamstime.com

Most Beautiful Face ... ntv.com

Incredibly Beautiful Wo... medium.com

1500+ Beautiful Black ... unsplash.com

1990 2019 Evolution Of The Most Beautiful Women ... youtube.com

Beautiful Woman Portrait. Beaut... 123rf.com

How Can Being Beautiful Be A Bad T... psychologytoday.com

Beautiful Woman With Natural Makeup ... istockphoto.com

Related searches

- most beautiful woman's body in the world
- face beautiful woman
- fit beautiful woman

The top beauty influencers to follow on ... luxuryifestyemag.co.uk

Nude Makeup. by Duet Po... stocky.com - In stock

mathematically beautiful woman ... stuff.co.nz

Jessy Hartel on Insta... pinterest.com

1,921,070 Beautiful Woman Photos and ... gettyimages.com

Man crucified over 12-point list of ... nypost.com

10 Most Beautiful Faces in the World ... manofmany.com

500,000+ Best Beautiful... pexels.com

The Top Twenty Most B... brightside.me

most beautiful woman L... independent.ie

Beautiful Woman On The... istockphoto.com

Beautiful Woman Srilanka By ... webneel.com

Related searches

- pretty girls
- beautiful wallpaper
- face most beautiful woman

Countries with the mos... legit.ng

Naval Warfare and the ... usni.org

The Most Beautiful Wo... esquire.com

Beyonce Ranked 2nd M... thejasminebrand.com

Beautiful Woman Face ... elements.envato.com

Portrait of a beautiful ... focusedcollection.com

Most Beautiful Women in The World [2022 ... womenintheworld.org

Liza Soberano of the P... starmometer.com

Most beautiful female journalists ... swagmagazine.com

50 Most Beautiful Women In The Worl... fabulously.in

The 25 Most Beautiful ... suburbanmen.com

Beyonce most beautiful wom... mirror.co.uk

Beautiful woman with make up - Kineo kineosystem.com

Beautiful Woman Face Portrait Beau...

Most Beautiful Woman ...

Supermodel Bella Hadid is World's Most ...

Pretty Woman ...

Most Beautiful Woman Face ...

Most Beautiful Women ...

In Pictures: Ten most beau...

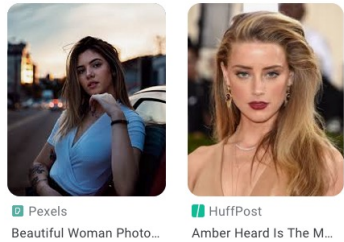
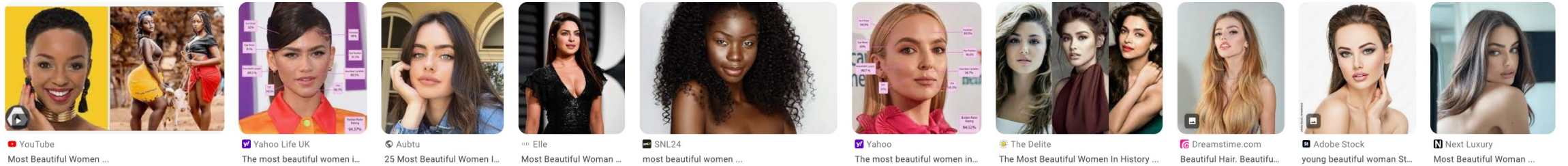
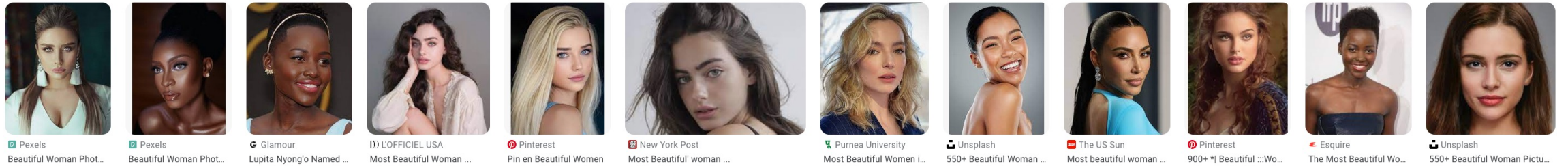
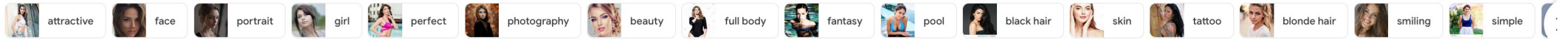
Most Beautiful Women in The World I202...

10 Most Beautiful Faces in the World ...




Amber Heard Is The Mo...

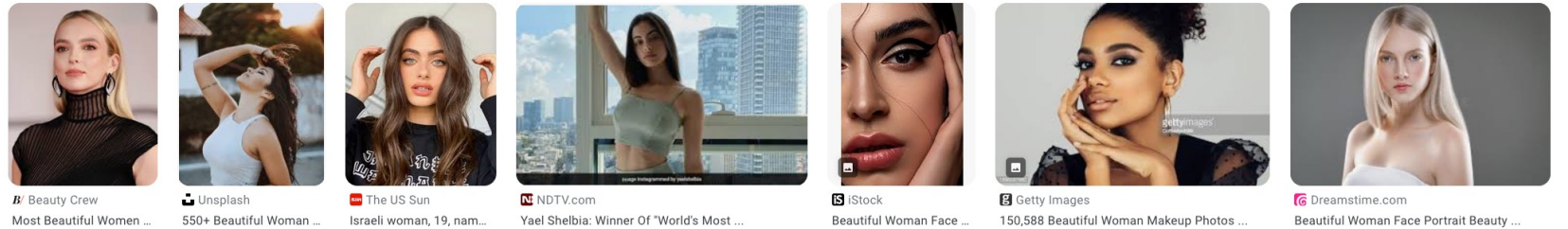
Yael Shelbia is Named The Most ...

My search results (Spring 2023)



Related searches

-  fit beautiful woman
-  face most beautiful woman
-  face beautiful woman



Questions/Comments?



Kenny will have the final word...