

AI AI AI AI AI AI AI AI

20 A.I. Companies You Cannot Miss! Is Artificial Intelligence the Next Bubble?



NODEFLAIR



These are all big players ...

Where are you in this competition?

WHAT BIG TECH COMPANIES ARE DOING IN AI

COMPANY	INVESTMENTS 2012 – 2017 YTD	ACQUISITIONS 2012 – 2017 YTD	SELECT INTERNAL PROJECTS
			A9 Amazon Lex (powers Alexa) Apache MXNet Amazon Polly Amazon Rekognition Amazon Go
		 	Siri Core ML Neural engine Project Titan
			The Network. Intuitive.
		 	M Big Basic Caffe2 DeepMask/SharpMask
	 		Predix.io
	 	 	Google Home DeepMind Google Brain TensorFlow, TPU Quantum AI Waymo
			Watson TureNorth PowerAI
	 	 	Loihi Intel Nervana (powers next gen Intel chips like Knights Mill)
	 	 	Cortana Azure ML platform Cognitive Toolkit Project Brainwave Microsoft Pix 2nd gen. Holographic Processing Unit
			Adaptive Intelligent Apps Oracle Autonomous Database cloud

CBINSIGHTS

Tanpa malu, gambar-gambar ini diperoleh dari Google Search.

Haruskah saya FOMO dengan semua ini
??????

AI
AI
AI
AI
AI AI

Keren kali ye update status sebagai "Pakar AI" di LinkedIn ...

Ikutan FOMO ah ...

- Ah, mau buat LLMs lokal Indonesia yang akan mengalahkan DeepSeek dan ChatGPT!
- What do you have?



Tanpa malu, gambar ini diperoleh dari Google Search.

- Dengan **uang \$6 juta**, DeepSeek mampu menyaingi ChatGPT.
- Namun di Indonesia ...
- Dengan **uang \$200 juta** (pendanaan seri D), sebuah perusahaan yang jualan aplikasi akuakultur dan perikanan, malah berujung **FRAUD**.
- Dengan **IPO \$1,5 miliar**, sebuah perusahaan penjual lapak-lapak online, malah **tutup lapak** 3 tahun kemudian.

Ada yang salah?



anton ✓ @abacaj · Jan 23

How is Deepseek going to make money?

727

257

3.6K

1M



Han Xiao ✓ @hxiao · Jan 23

deepseek's holding 幻方量化 is a quant company, many years already, super smart guys with top math background; happened to own a lot GPU for trading/mining purpose, and deepseek is their side project for squeezing those gpus

82

449

3.3K

216K



Han Xiao ✓

@hxiao

so my reply went viral...let me add sth here. i know 幻方量化 high-flyer long time ago and even back in the late 2023 i heard people say they were running deepseek llm as side project bc of the leftover gpu. but nobody even in china takes them seriously. So it's not that chinese ai teams r lean & great and can do such such great things; but it's only deepseek lean & mean - chinese ai companies are just as fat and heavy on marketing just like their american counterpart.



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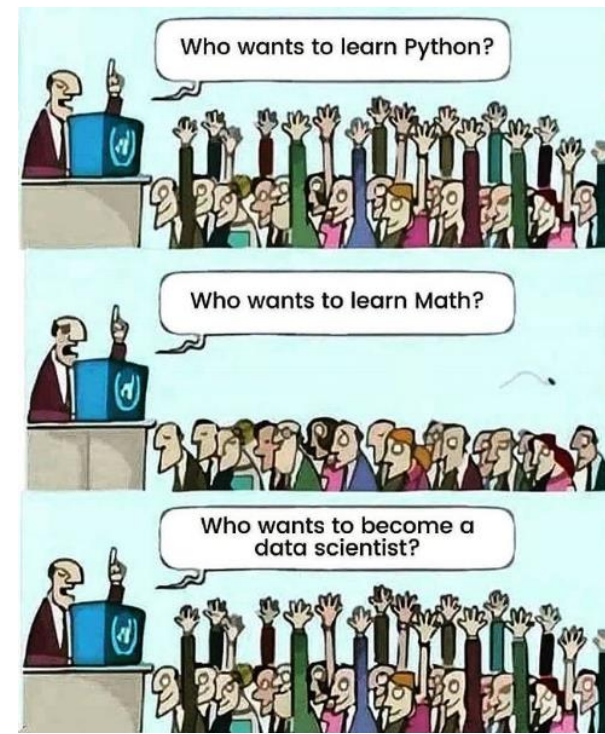
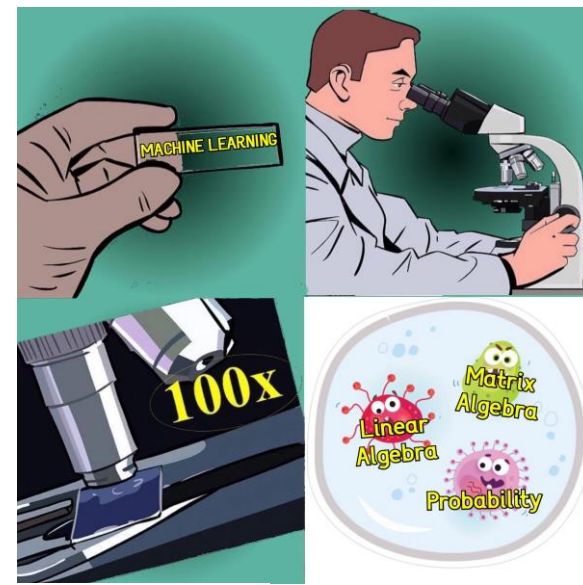
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Jangan tertipu (baca: "FOMO")
dengan buzz words: AI, LLMs,
Deep Learning, GenAI, Data
Science, Big Data, ...

Doing Machine Learning
without statistics and
math foundation 🤔



Tanpa malu, meme-meme ini diperoleh
dari Google Search.

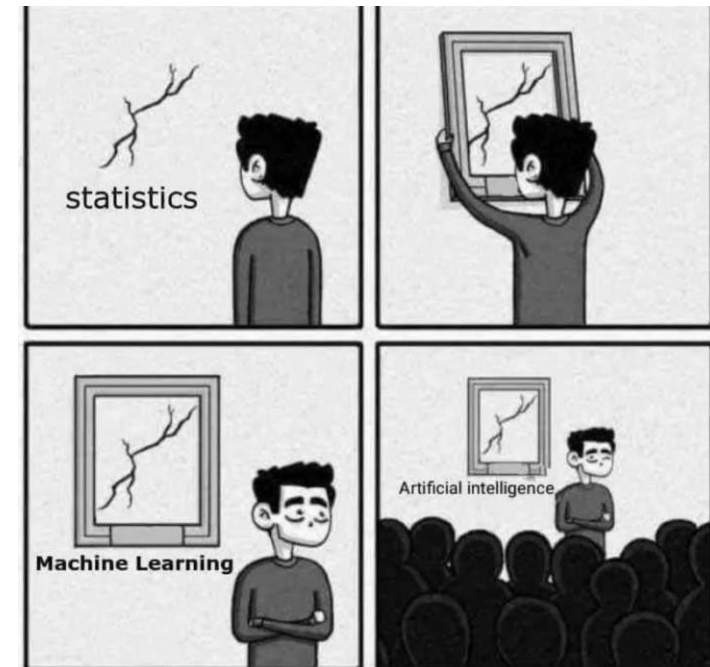


stoop kid
@StoopMensch

Follow

"data scientist" is a funny title,
because it means one of two things

1. someone who did a bootcamp
and is essentially a very jr dev who
can use jupyter, pandas, etc
2. statistics PhD math god with a
\$5M TC at a hedge fund



Lupakan AI, Lupakan LLMs,
Lupakan Deep Learning, dan
semuanya untuk sementara
waktu.

Mari sejenak renungkan
pertanyaan mendasar: **untuk apa**
Anda kuliah di Fasilkom UI? Apa
rencana 5-10 tahun kedepan? ...

Life should be goal-directed (and
yes, this is only my opinion; you
may disagree with this).

Tanpa malu, meme-meme ini diperoleh
dari Google Search.



Dan saya sudah **buang-buang waktu**
sekitar 1.5 jam untuk cari meme
buat presentasi kuliah hari ini.

Kuliah ini **bukan** tentang **LLM, AI, whatever..**
dan segala popularitas yang melekat padanya.

Jika Anda ambil kuliah ini untuk belajar
membuat **ChatBot** dengan **LLM**, **Anda sudah**
salah besar.

Kuliah ini mengajarkan ilmu *long-lasting* "matematika", "algorithms", dan "pemrograman".

Anda bertemu lagi Kalkulus, DDP, SDA, DAA, KASDAD, bahkan Anum (*unconstrained optimization*), dan sebagian dari TBA.

Introduction

CSCE604135 Information Retrieval
Fakultas Ilmu Komputer, UI

Alfan Farizki Wicaksono

Search

"Search" is one of our primary needs.

"Search" is a mechanism to fulfill our information needs!

- Tiba-tiba ingin makan "es krim goreng". **Search!**
- Anda penasaran dengan bagaimana alam semesta ini diciptakan? **Search!**
- Anda seorang dokter yang sedang menangani kasus yang belum pernah dihadapi sebelumnya. **Search!**
- Anda seorang *librarian* (pustakawan) yang ditugaskan menemukan buku-buku yang membahas tentang *Einstein's general relativity*. **Search!**
- Anda seorang programmer yang *stuck* selama 1 jam memikirkan apa yang salah dari program Anda. **Search!**

Sejarah Information Retrieval (IR) bermula dari **Perpustakaan**.
Bagaimana mengatur buku-buku yang begitu banyak, dan bagaimana membantu proses search? --> **Catalogue Scheme**

Photo credit: Alistair Moffat



Sejarah Information Retrieval (IR) bermula dari **Perpustakaan**.
Bagaimana mengatur buku-buku yang begitu banyak, dan bagaimana membantu proses search? --> **Catalogue Scheme**

Photo credit: Alistair Moffat



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Bagaimana mengatur buku-buku yang begitu banyak, dan bagaimana
membantu proses search? --> **Catalogue Scheme**

M 21498

ECKEL, Bruce

Thinking in Java / Bruce Eckel. - 2. izd. -
Upper Saddle River : Prentice-Hall Ptr, 2000. -
1127 str. : CD Rom ; 24 cm.

ISBN 0-13-027363-5

519.681

ID=10982

000021498

Sebuah Katalog Buku

1920 - 1930

Mechanical devices that searched a catalogue were devised by **Emanuel Goldberg**.

Dec. 29, 1931.

E. GOLDBERG
STATISTICAL MACHINE
Filed April 5, 1928

1,838,389

Fig. 1.

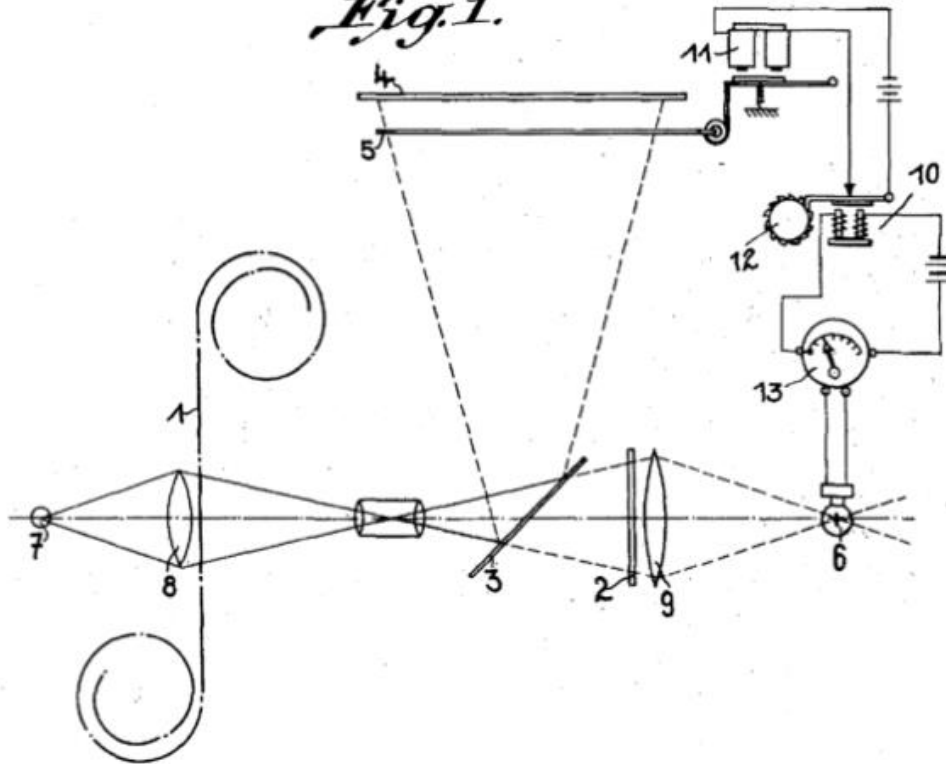


Fig. 4.

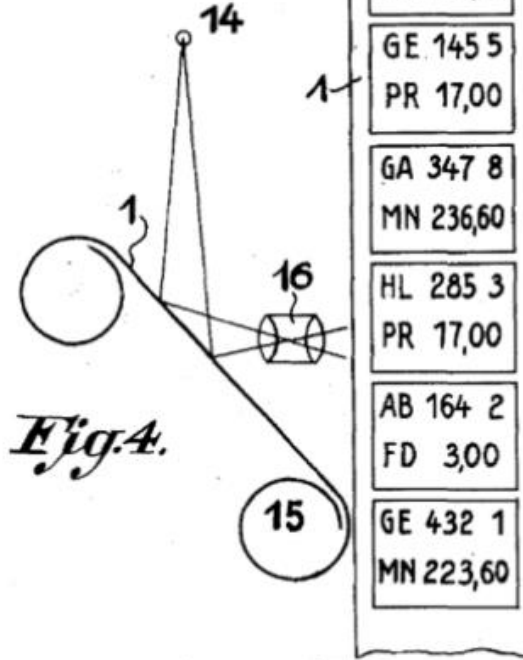


Fig. 2.

Fig. 3.



Inventor:

Emanuel Goldberg

Silakan baca "The History of Information Retrieval Research" oleh Mark Sanderson; ada di SCELE

1940 - 1950

- Early use of computers for search
- Univac Machine
 - Searching for text references associated with subject code
 - The code and text were stored on a magnetic steep tape
 - This could process at the rate of 120 words per minute.
- A computer developed by General Electric that search over 300,000 document abstracts.

1960 - 1990

- Teknologi dan penelitian di bidang IR berkembang pesat.
 - Konsep "term frequency" & "inverse document frequency"
 - Probability Ranking Principle
- Teknologi Komputer dan ukuran storage juga berkembang.
- Sebagian besar IR system untuk mendukung:
 - Library
 - Legal search, WESTLAW's WIN
 - Company-Specific -> search system for NASA

1990 - 2000

- Teknologi Web berkembang sangat pesat!
- Banyaknya Dokumen Web meningkat drastis
 - Perlu teknologi **Web Search**



2000 - 201x



anak Fasilkom UI



Semua

Gambar

Berita

Shopping

Video

Lainnya

Alat

Sekitar 99.700 hasil (0,33 detik)



youtube.com

<https://m.youtube.com/watch>

OHVision #2: 5 Anak Fasilkom UI Jujur-jujuran? - YouTube



Hello Dreamers! Open House **Fasilkom UI** hadir kembali dengan video yang seru, nih! Kali ini ceritanya langsung dari 5 orang **mahasiswa** ...

YouTube · Fasilkom UI · 13 Nov 2021



ui.ac.id

<https://cs.ui.ac.id>

Fakultas Ilmu Komputer Universitas Indonesia – Fasilkom UI ...

Pastikan Anda telah membaca latest updates **Fasilkom UI** mengenai COVID-19 terkait berbagai pengumuman, pembelajaran jarak jauh, pencegahan dan prosedur pelaporan ...

<https://cs.ui.ac.id> › 2014/09/22 › beasiswa-iwk-ui-dan-...

Beasiswa IWK UI dan IWK Fasilkom untuk Anak-Anak Bangsa

22 Sep 2014 — Kamis (11/9), **Universitas Indonesia** melalui IWK (Ikatan Wanita Keluarga) UI menyelenggarakan kegiatan Penyerahan Beasiswa untuk **Anak-Anak** ...



anak Fasilkom UI



All

Images

Videos

News

Maps

Settings

Indonesia (en)

Safe search: moderate

Any time

<https://cs.ui.ac.id> › about

Tentang Fasilkom UI - Fakultas Ilmu Komputer Universitas Indonesia

Tentang Fasilkom UI Manajemen Staf Pengajar Tetap (IND Version) Profil Fakultas Ilmu Komputer Universitas Indonesia 2021 2.800+ mahasiswa Terbaik dari seluruh penjuru nusantara 80+ dosen Lulusan perguruan tinggi top dunia 6.000+ alumni Dengan jaringan yang tersebar di tujuh benua Sejarah 1972

<https://cs.ui.ac.id>

Fakultas Ilmu Komputer Universitas Indonesia - Fasilkom UI. Terbaik d...

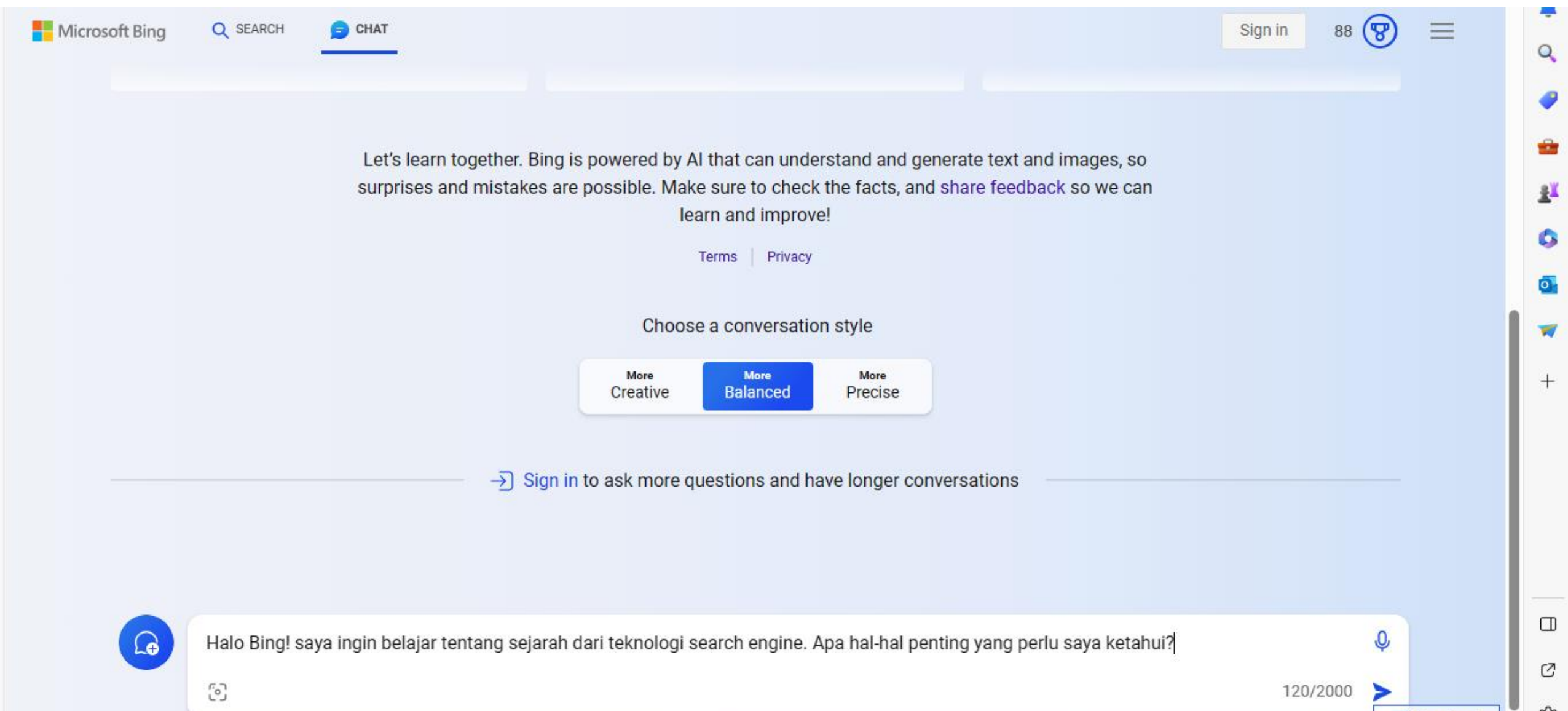
Fasilkom UI Sambut Mahasiswa Baru Program Sarjana Tahun Akademik 2023/2024

<https://www.anakui.com> › ya-begini-nasib-jadi-anak-fasilkom-ui

Ya Begini Nasib Jadi Anak Fasilkom UI - ANAK UI

FASILKOM UI adalah singkatan dari Fakultas Ilmu Komputer Universitas Indonesia merupakan salah satu fakultas di bawah Universitas Indonesia yang didirikan untuk menghasilkan lulusan sarjana komputer yang mampu bersaing di pasar tenaga kerja global, menciptakan dan mengembangkan pengetahuan dalam bidang ilmu komputer dan teknologi informasi, berp...

Now: Web Search + Chat Systems



The screenshot shows the Microsoft Bing homepage with a light blue background. At the top, there's a navigation bar with the Microsoft Bing logo, a search bar, and a chat icon. The chat icon is highlighted with a blue underline. To the right of the chat icon, there's a 'Sign in' button and a user profile icon. Below the navigation bar, there's a large text area with the message: "Let's learn together. Bing is powered by AI that can understand and generate text and images, so surprises and mistakes are possible. Make sure to check the facts, and [share feedback](#) so we can learn and improve!". Below this text, there are links for "Terms" and "Privacy". Further down, there's a section titled "Choose a conversation style" with three buttons: "More Creative", "More Balanced" (which is highlighted in blue), and "More Precise". At the bottom, there's a chat input area with a blue speech bubble icon on the left and a microphone icon on the right. The input text reads: "Halo Bing! saya ingin belajar tentang sejarah dari teknologi search engine. Apa hal-hal penting yang perlu saya ketahui?". To the right of the input text, there's a character count "120/2000" and a blue arrow icon. On the far right, there's a vertical sidebar with various icons for different Bing features.

Microsoft Bing SEARCH CHAT Sign in 88

Let's learn together. Bing is powered by AI that can understand and generate text and images, so surprises and mistakes are possible. Make sure to check the facts, and [share feedback](#) so we can learn and improve!

[Terms](#) | [Privacy](#)

Choose a conversation style

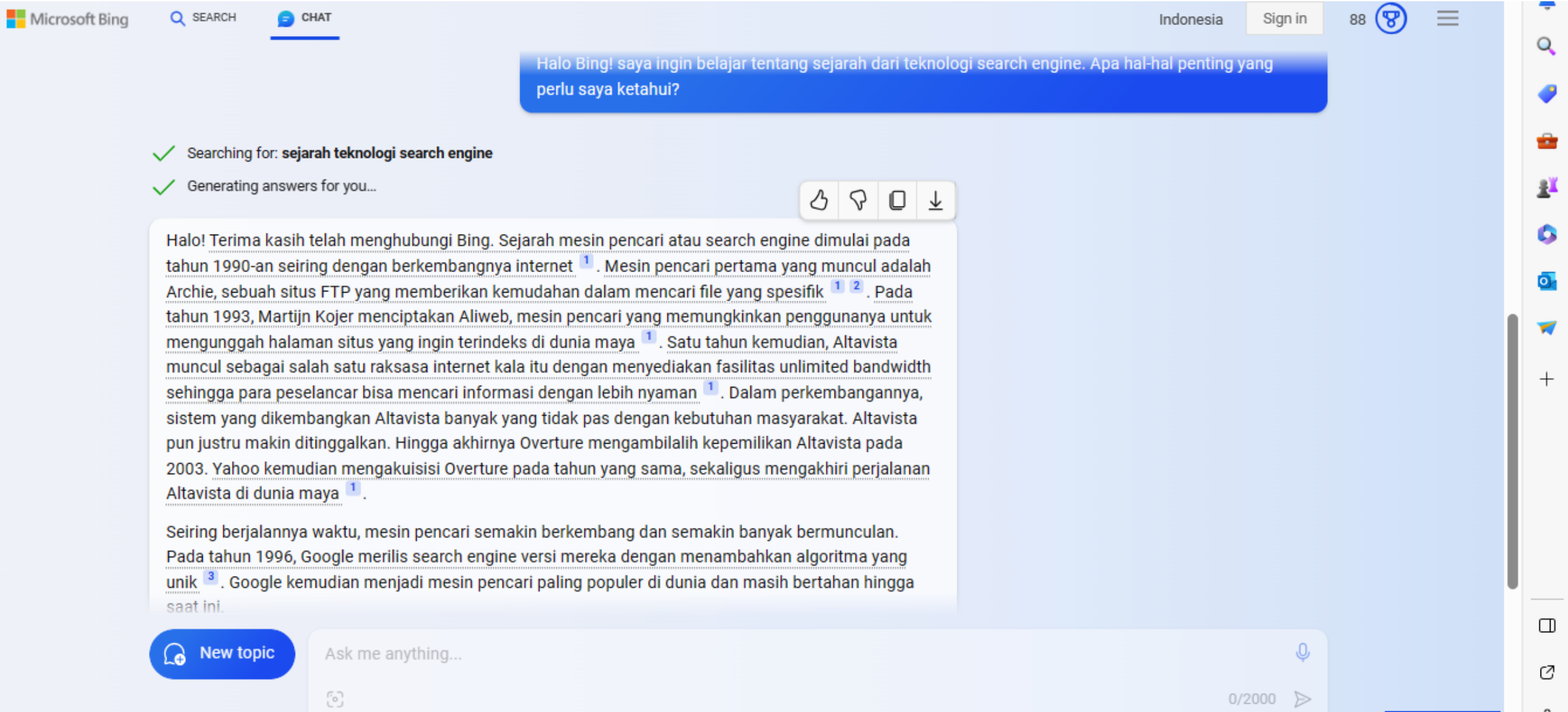
More Creative **More Balanced** More Precise

→ [Sign in](#) to ask more questions and have longer conversations

Halo Bing! saya ingin belajar tentang sejarah dari teknologi search engine. Apa hal-hal penting yang perlu saya ketahui?

120/2000

Now: Web Search + Chat Systems



The screenshot shows the Microsoft Bing homepage with the chat interface active. The chat history shows a search for "sejarah teknologi search engine" and a generated answer. The answer discusses the history of search engines, starting from Archie in 1990, Aliweb in 1993, and Altavista in 1996, leading to Google's dominance. The interface includes a search bar, a chat input field, and a sidebar with various icons.

Microsoft Bing SEARCH CHAT Indonesia Sign in 88

Halo Bing! saya ingin belajar tentang sejarah dari teknologi search engine. Apa hal-hal penting yang perlu saya ketahui?

✓ Searching for: **sejarah teknologi search engine**

✓ Generating answers for you...

Halo! Terima kasih telah menghubungi Bing. Sejarah mesin pencari atau search engine dimulai pada tahun 1990-an seiring dengan berkembangnya internet ¹. Mesin pencari pertama yang muncul adalah Archie, sebuah situs FTP yang memberikan kemudahan dalam mencari file yang spesifik ^{1 2}. Pada tahun 1993, Martijn Koster menciptakan Aliweb, mesin pencari yang memungkinkan pengguna untuk mengunggah halaman situs yang ingin terindeks di dunia maya ¹. Satu tahun kemudian, Altavista muncul sebagai salah satu raksasa internet kala itu dengan menyediakan fasilitas unlimited bandwidth sehingga para peselancar bisa mencari informasi dengan lebih nyaman ¹. Dalam perkembangannya, sistem yang dikembangkan Altavista banyak yang tidak pas dengan kebutuhan masyarakat. Altavista pun justru makin ditinggalkan. Hingga akhirnya Overture mengambil alih kepemilikan Altavista pada 2003. Yahoo kemudian mengakuisisi Overture pada tahun yang sama, sekaligus mengakhiri perjalanan Altavista di dunia maya ¹.

Seiring berjalannya waktu, mesin pencari semakin berkembang dan semakin banyak bermunculan. Pada tahun 1996, Google merilis search engine versi mereka dengan menambahkan algoritma yang unik ³. Google kemudian menjadi mesin pencari paling populer di dunia dan masih bertahan hingga saat ini.

New topic Ask me anything... 0/2000

Information Retrieval

Goal: finding material (usually documents) of an **unstructured nature** (usually text) that satisfies an **information need** from within **large collections** and helps the user complete a **task**.

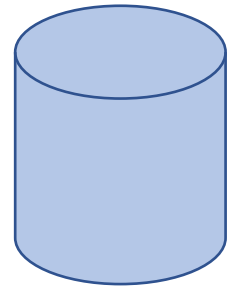
User's Head:
Information Need



Query



Search Engine



Large Collections

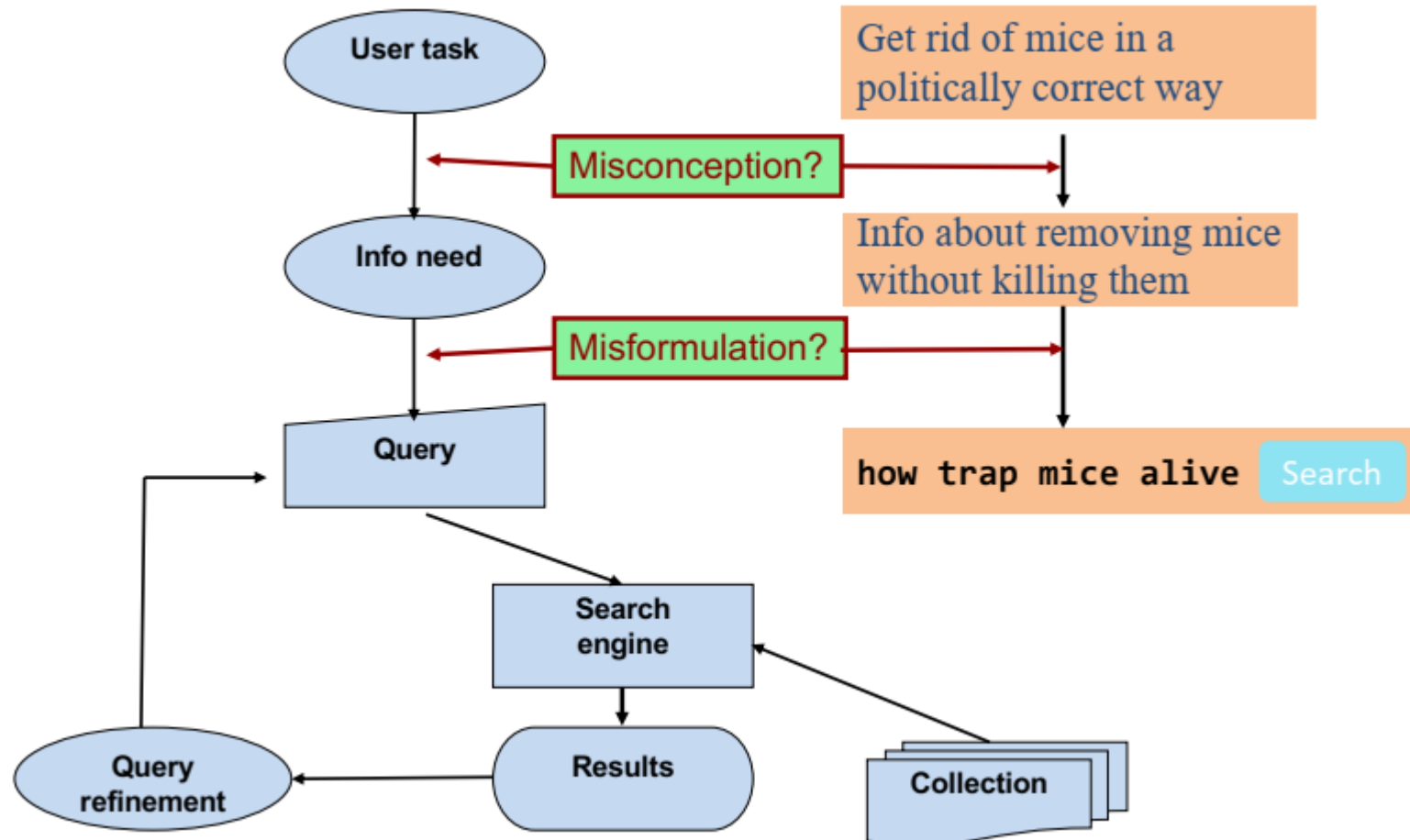
Hasil search diharapkan "relevan"
terhadap information need.

Bukan relevan terhadap query!

Results

1. Doc #43
2. Doc #87
3. ...

The Classic Search Model



Contoh lain

Lakukan kajian bagaimana hidup Anda bisa Bahagia.

Butuh informasi tentang membangun bisnis dan cepat kaya

"bisnis untung besar" **Search**

IR vs Databases

- IR Systems
 - **Koleksi:** tidak terstruktur atau semi-terstruktur
 - **Queries:** boleh berupa *natural language*; query bisa ambigu
 - **Results:** diharapkan relevan terhadap *information needs*, dan berguna untuk menyelesaikan sebuah *task*; dan bisa diurutkan berdasarkan skor.
- Database Management Systems
 - **Koleksi:** terstruktur (misal, dalam bentuk tabel dan relasi antar tabel)
 - **Queries:** terstruktur, formal dan tidak ambigu, seperti SQL pada *relational databases*
 - **Results:** exact matches dengan query

Google -> hundreds of billions of webpages!!

The image is a screenshot of a Google search interface. At the top, the Google logo is on the left, and a search bar contains the text "dr who". To the right of the search bar are icons for clearing the search, voice search, and a magnifying glass. Below the search bar, a red oval highlights the search filters: "All", "Images", "News", "Videos", "Shopping", and "More". Below these filters, it says "About 7,290,000,000 results (0.79 seconds)".

Below the search results, there is a section for "Doctor Who". It features a small image of the Doctor Who logo, the title "Doctor Who", and the text "1963 · Sci-fi · 26 seasons". To the right of this are several orange buttons: "Overview", "Cast", "Episodes", "Trailers & clips", "Reviews", and "Merchandise".

Below the "Doctor Who" section, there is a "Cast" section with a right-pointing arrow. It displays six cast members in a row, each with a portrait photo and their name and role:

- Mandip Gill (Yazmin Khan)
- Matt Smith
- Tom Baker (The Doctor, ...)
- David Tennant
- William Hartnell (The Doctor)
- Jodie Whittaker (Thirteenth D...)

Below the cast section, there is a link to the Wikipedia page for Doctor Who: "https://en.wikipedia.org › wiki › Doctor_Who". Below this link is the title "Doctor Who - Wikipedia" and a snippet of text: "Doctor Who is a British science-fiction television programme broadcast by the BBC since 1963. The programme depicts the adventures of a Time Lord called the ...". Below this snippet is another link: "Doctor_(Doctor_Who)".

On the right side of the page, there are two circular buttons: "Already watched" (with a checkmark icon) and "Want to watch" (with a bookmark icon). Below these buttons is a section titled "About" which shows a rating of "8.4/10 · IMDb" and a statement "92% liked this TV show" with "Google users" below it. At the bottom right, there are two icons: a thumbs up and a thumbs down. Below these icons is a paragraph of text: "Doctor Who is a British science-fiction television programme broadcast by the BBC since 1963. The programme depicts the adventures of a Time Lord called the Doctor, an extraterrestrial being who appears to be human. The Doctor explores the universe in a time-travelling space ship called the TARDIS."

Big Picture Kuliah IR Selama 1 Semester

