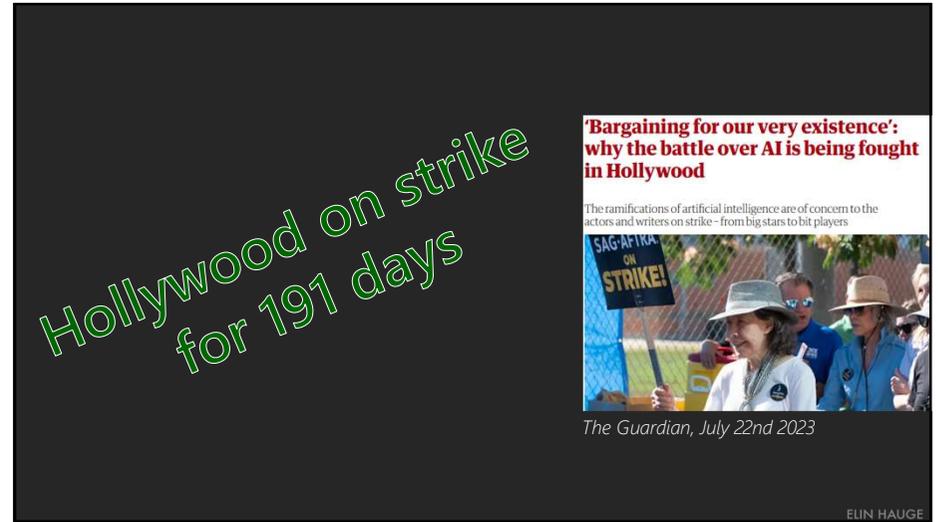


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4

$$J = \frac{1}{n} \sum_{i=1}^n (\text{pred}_i - y_i)^2$$

$$J = \frac{1}{n} \sum_{i=1}^n (a_0 + a_1 \cdot x_i - y_i)^2$$

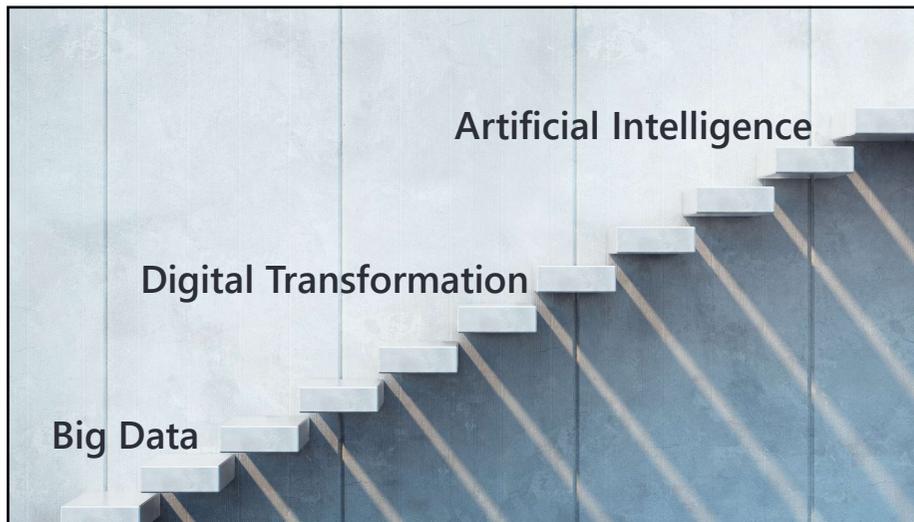
$$\frac{\partial J}{\partial a_0} = \frac{2}{n} \sum_{i=1}^n (a_0 + a_1 \cdot x_i - y_i) \implies \frac{\partial J}{\partial a_0} = \frac{2}{n} \sum_{i=1}^n (\text{pred}_i - y_i)$$

$$\frac{\partial J}{\partial a_1} = \frac{2}{n} \sum_{i=1}^n (a_0 + a_1 \cdot x_i - y_i) \cdot x_i \implies \frac{\partial J}{\partial a_1} = \frac{2}{n} \sum_{i=1}^n (\text{pred}_i - y_i) \cdot x_i$$

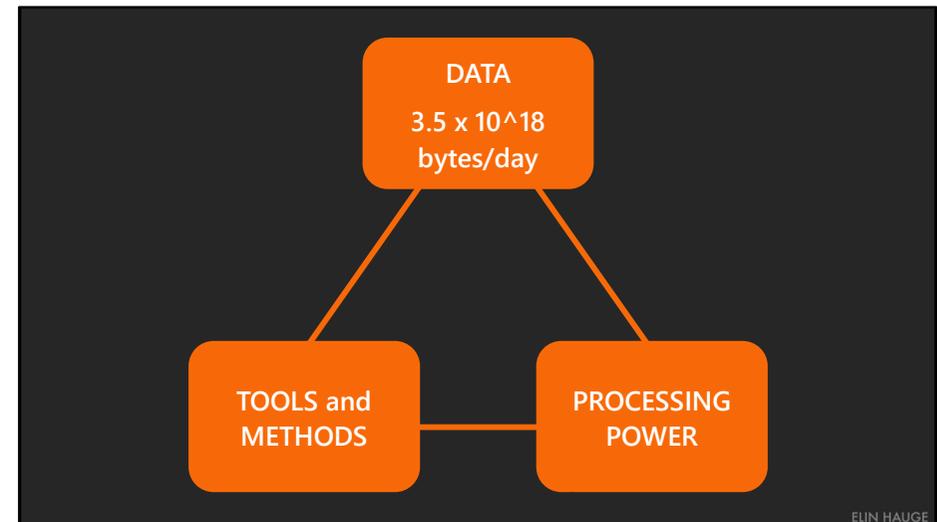
5



6



7



8

ACADEMIC -> ENGINEERING -> DESIGN

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chatGPT – a paradigm shift
and a strategic diversion



10

Large Language Models
 = semantic probabilistic information models

NOT truth machines



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BRAIN TEASER:
 the Likert scale

Likert Scale	Very Unlikely	Unlikely	Likely	Very Likely
I would recommend this product to my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will buy this product again in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would use a coupon if I received one via email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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HALLUCINATIONS
= MACHINE CREATIVITY GONE ROGUE

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Large Language Models as foundations...



...for your context-specific applications

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AI is a toolbox
INTERPRET - PREDICT - GENERATE



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Customer service
Music recommendations
Public transportation routes
Credit card fraud detection
eCommerce offers
Discount coupons

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Meet Lilli, our generative AI tool that's a researcher, a time saver, and an inspiration

in [social icons]



McKinsey&Company

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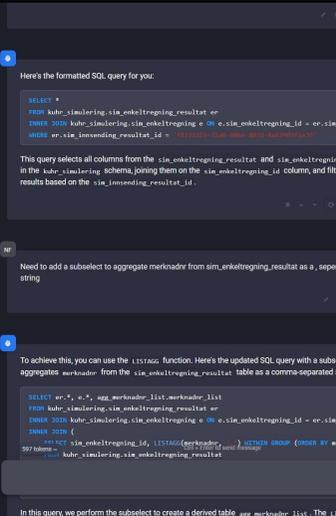
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Speeding up coding

- Drafting new code
- Conversion of legacy code
- Testing and comparison
- QA and documentation

BUT...



Here's the formatted SQL query for you:

```
SELECT *
FROM kuh_simulating_sia_enkeltregning_resultat er
INNER JOIN kuh_simulating_sia_enkeltregning er_sia ON er_sia.enkeltregning_id = er_sia.enkeltregning_id
```

This query selects all columns from the `sim_enkeltregning_resultat` and `sim_enkeltregning` in the `kuh_simulating` schema, joining them on the `sim_enkeltregning_id` column, and filters results based on the `sim_enkeltregning_resultat_id`.

Need to add a subselect to aggregate `merknavdr` from `sim_enkeltregning_resultat` as a separate string

To achieve this, you can use the `LISTAGG` function. Here's the updated SQL query with a subselect aggregates `merknavdr` from the `sim_enkeltregning_resultat` table as a comma-separated list:

```
SELECT er.*, er.*, agg_merknavdr_list.merknavdr_list
FROM kuh_simulating_sia_enkeltregning_resultat er
INNER JOIN kuh_simulating_sia_enkeltregning er_sia ON er_sia.enkeltregning_id = er_sia.enkeltregning_id
INNER JOIN (
  SELECT sim_enkeltregning_id, LISTAGG(merknavdr, ',' WITHIN GROUP (ORDER BY merknavdr)) AS merknavdr_list
  FROM kuh_simulating_sia_enkeltregning_resultat
  GROUP BY sim_enkeltregning_id
) agg_merknavdr_list ON er_sia.enkeltregning_id = agg_merknavdr_list.sim_enkeltregning_id
```

In this query, we perform the subselect to create a derived table `agg_merknavdr_list`. The LI

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AI Agents

Context-aware, memory, multi-modal

AI Agent Crews

Distinct tasks, specialized, chain-of-command, automated collaboration



Generated by AI, Copilot, Feb 22nd 2024

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Fishfarming

- Improved animal welfare
- Increased yield
- Reduced environmental footprint
- Traceable sourcing

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3 x V

- Volume
- Variety
- Velocity



FINANCIAL TIMES

Norway's oil fund warns cyber security is top concern

Hacking eclipses turbulent markets as Norges' biggest worry with three 'serious' attempts a day

Norges Bank Investment Management chief executive Nicolai Tangen said cyber attacks were becoming 'increasingly sophisticated' © Francis Sullivan/Reuters

Adrienne Klasa in London and Robin Wigglesworth in Oslo AUGUST 22 2022

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Bias

- a reflection of human stupidity



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Data

is the new oil

Authentic data

is the new oil



The Economist

Theresa May v Brussels

Ten years on: banking after the crisis

South Korea's untamed revolution

Biology, but without the cells

The world's most valuable resource

Data and the new rules of competition

May 6th 2017

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High Risk

Medium to Low Risk

European Commission

The AI Act

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Algorithms vs decisions

- what is the cost of being wrong?

Jan 15th 2024 ELIN HAUGE

26

How the AI revolution is different: It threatens white-collar workers
CBS News, Jan 24th 2024

"AI Will Replace Need For All Jobs And Create Universal High Income": Elon Musk
NDTV World, Nov 8th 2023

Will AI Make White Collar Workers Obsolete?
Inc., Feb 23rd 2024

Nvidia's CEO, Jensen Huang: AI will take over coding, making learning optional
Techwire Asia, March 4th 2024

At Davos, a warning that AI is coming for white-collar jobs
TechTarget, Jan 17th 2024

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Embracing and mastering AI
is a societal mission

- resignation is not a viable option

PerG.DArt

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Hollywood on strike for 191 days

'Bargaining for our very existence': why the battle over AI is being fought in Hollywood

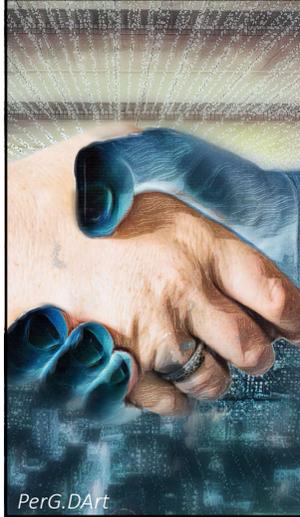
The ramifications of artificial intelligence are of concern to the actors and writers on strike - from big stars to bit players



The Guardian, July 22nd 2023

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AI is the natural next step

Data quality is essential

AI is a toolbox

PerG.DArt

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It takes a village to raise a child.

It will take a planet to raise AI.

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