



Fintech & Sustainability

From A to SME Loan – Project

08.09.2024

About HangiKredi



Open Banking and Wallet Services:

- Enable secure sharing of financial data and digital payments
- Enhance access to financial services for consumers and businesses
- Personalised recommendations



Offers Investment Tools for:

- Comparing stock market prices
- Delivering tailored buy/sell recommendations

These insights are based not only on real-time data but also on a deep analysis of company reports and recently published documents



SME (KOBİ) Loan Assistance helps SME:

- Identify the best available loan options
- Providing insights into the likelihood of approval based on financial profiles as well as lender criteria



Green Transformation Project

Optimize idle server resources with **AI** to ensure optimal performance and reduced energy consumption.

Aims:

- Reduce Energy Consumption
- Optimize Resource Use
- Reclaim Idle Resources
- Data-Driven Optimization

AI Technology: Reinforcement Learning– Sequence Modeling





Project introduction



Introduction & Problem Statement

- **ESG Score:**
Environmental, Social and Governance
- **SMEs & Securing Loans:**
 - Embracing ESG is not easy but has a lot of benefits
 - ESG reporting is resource-intensive and complex
 - Many SMEs lack the resources
 - to efficiently assess ESG readiness
- **Proposed Solution:**
 - A streamlined pre-evaluation framework to assess ESG readiness
 - Helps SMEs understand their ESG standing and predict loan approval



Approach & Data

- Framework Implementation Phases:
 - Fundamental Questionnaires
 - A-D Rating System
 - Decision Model



Source MSCI

A	B	C	D	E	F	G	H	I	J	K	L	M
Company	EGroup1	EGroup2	EGroup3	EGroup4	Ggroup	SGroup1	SGroup2	SGroup3	SGroup4	Controversy Level	Controversy Score	ESG_Loan Approval
1	A	A	A	A	A	A	A	D	D	Moderate Controversy Level	2	High
2	A	A	A	A	A	A	A	A	A	Low Controversy Level	1	High
3	A	A	A	A	A	A	A	A	A	Low Controversy Level	1	High
4	B	B	A	A	A	C	A	A	A	None Controversy Level	N/A	High



Objectives & Expectations

- Generate a model to predict the 'ESG Loan Approval'
- Explain why the company is predicted as such "high, medium or low"
- Suggest some ideas to improve their status (business thinking)

Expectations:

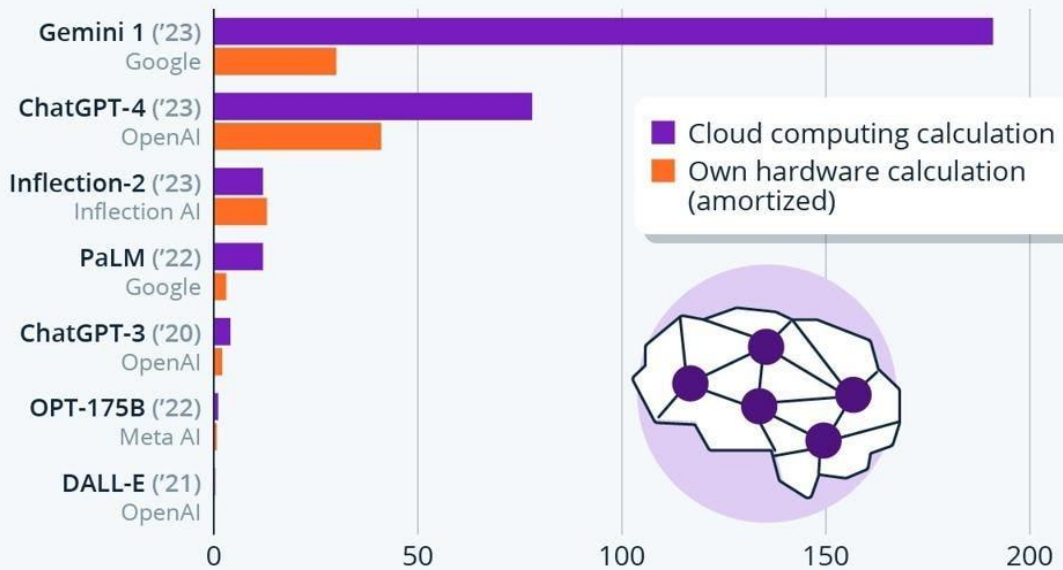
- EDA & statistical analysis – high
- Explanation of the methodology - high
- Predictive model - high
- Explainability of the model output - moderate
- LLM integration to generate a report – low



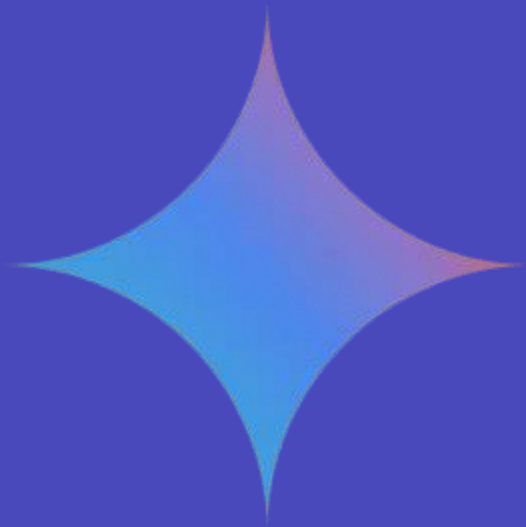
Cost of Training LLM Models

The Extreme Cost Of Training AI Models

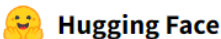
Estimated cost of training selected AI models (in million U.S. dollars), by different calculation models



Rounded numbers. Excludes staff salaries that can make up 29-49% of final cost (including equity)
Source: Epoch AI



OpenSource LLM Modals



Search models, datasets, users...

Models Datasets Spaces Posts Docs Solutions Pricing Log In Sign Up

Tasks Libraries Datasets Languages Licenses Other

Filter Tasks by name

Multimodal

- Image-Text-to-Text
- Visual Question Answering
- Document Question Answering
- Video-Text-to-Text

Computer Vision

- Depth Estimation
- Image Classification
- Object Detection
- Image Segmentation
- Text-to-Image
- Image-to-Text
- Image-to-Image
- Image-to-Video
- Unconditional Image Generation
- Video Classification
- Text-to-Video
- Zero-Shot Image Classification
- Mask Generation
- Zero-Shot Object Detection
- Text-to-3D
- Image-to-3D
- Image Feature Extraction

Natural Language Processing

- Text Classification
- Token Classification
- Table Question Answering
- Question Answering

Models 921,256 Filter by name

Full-text search Sort: Trending

- mattshumer/Reflection-Llama-3.1-70B**
Text Generation • Updated 2 days ago • 11.2k • 1.37k
- black-forest-labs/FLUX.1-dev**
Text-to-Image • Updated 23 days ago • 787k • 3.95k
- Qwen/Qwen2-VL-7B-Instruct**
Image-Text-to-Text • Updated 2 days ago • 156k • 456
- Shakker-Labs/AWPortrait-FL**
Text-to-Image • Updated 3 days ago • 21.4k • 262
- openbmb/MiniCPM3-4B**
Text Generation • Updated 1 day ago • 2.53k • 235
- gpt-omni/mini-omni**
Text-to-Speech • Updated 4 days ago • 218
- meta-llama/Meta-Llama-3.1-8B-Instruct**
Text Generation • Updated 19 days ago • 3.12M • 2.31k
- deepseek-ai/DeepSeek-V2.5**
Updated 2 days ago • 2.17k • 147
- black-forest-labs/FLUX.1-schnell**
Text-to-Image • Updated 23 days ago • 1.87M • 2.15k
- CausalLM/miniG**
Text Generation • Updated 1 day ago • 275k • 193
- THUDM/CogVideoX-5b**
Text-to-Video • Updated 10 days ago • 29.7k • 346
- 01-ai/Yi-Coder-9B-Chat**
Text Generation • Updated 2 days ago • 1.5k • 96
- ByteDance/Hyper-SD**
Text-to-Image • Updated 11 days ago • 120k • 827
- zer0int/CLIP-GmP-ViT-L-14**
Zero-Shot Image Classification • Updated 2 days ago • 128 • 128



Are LLM Modals Really Advanced?

ChatGPT ▾

which one is bigger 3.11 or 3.9

3.11 is bigger than 3.9. The difference is 0.21, so 3.11 is larger.

< 2/2 >

Message ChatGPT

ChatGPT can make mistakes. Check important info.

ChatGPT ▾

How many r in the word strawberry

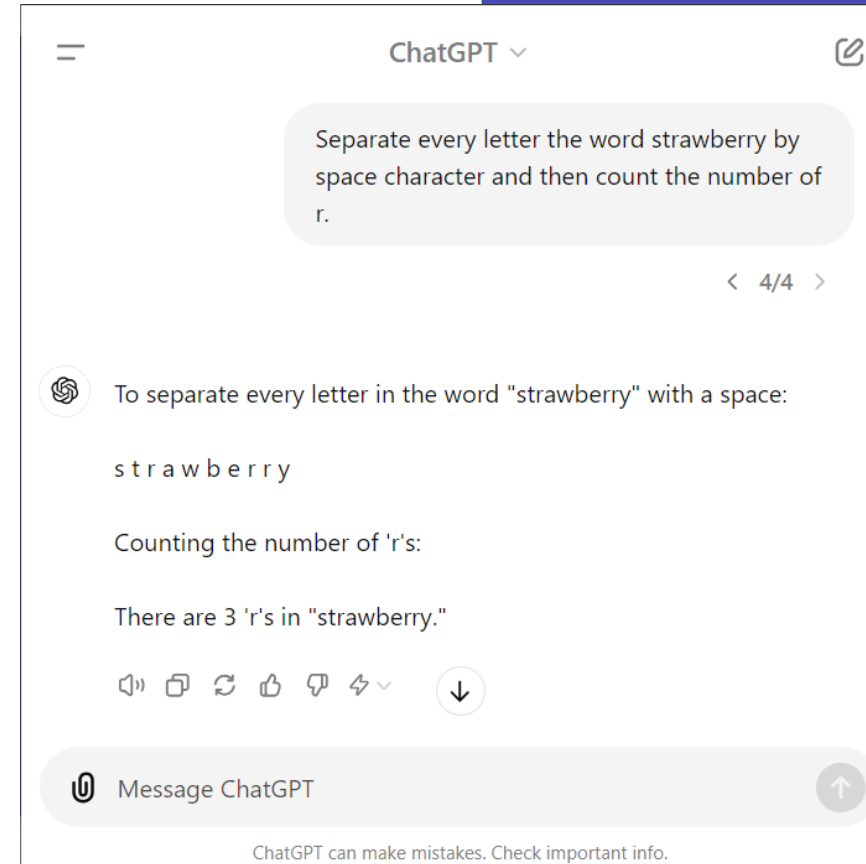
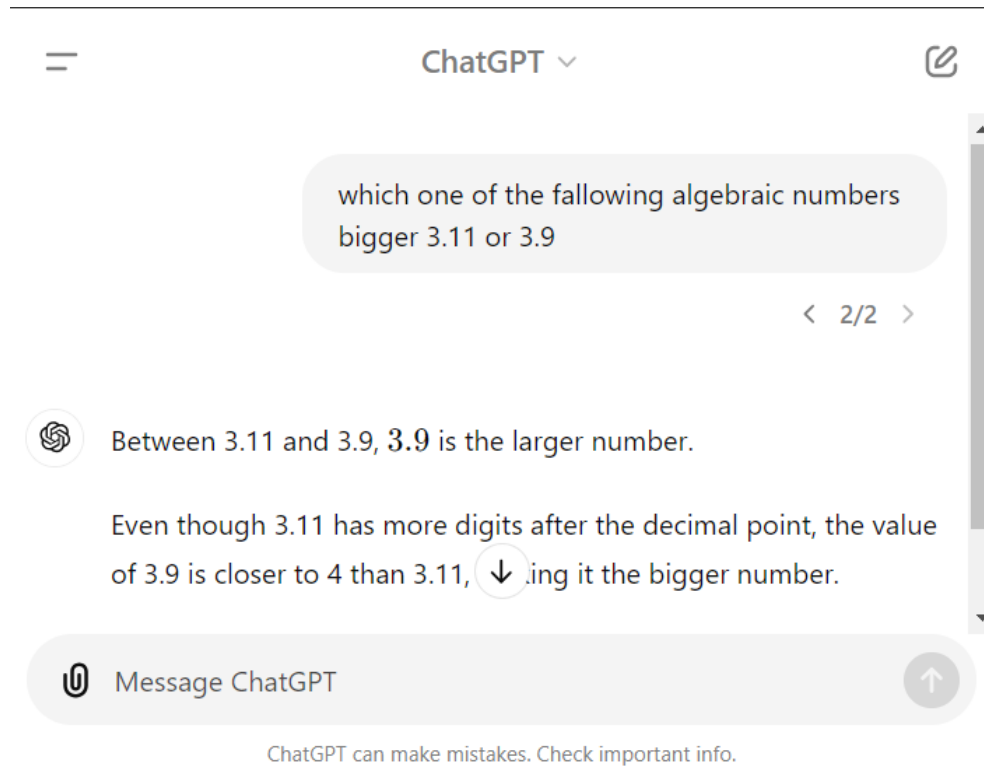
The word "strawberry" contains 2 letter "r"s.

Message ChatGPT

ChatGPT can make mistakes. Check important info.



Talking the Same Language as LLM: Prompt Engineering



Prompt Engineering

Why?

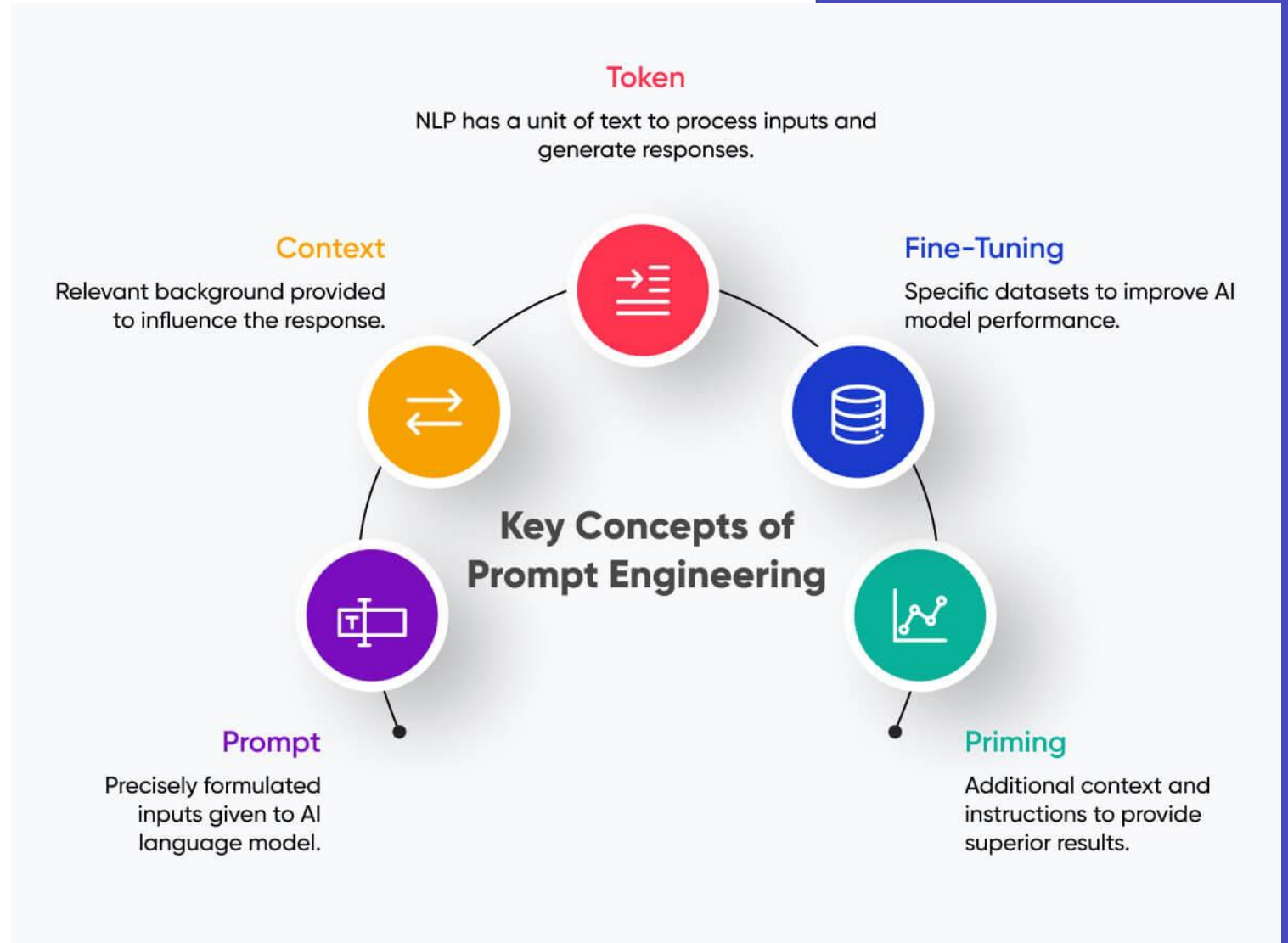
- Efficiency
- Customization

How?

- Clarity
- Specificity

Techniques

- Role Playing
- Few-Shot Learning



LLM & Prompt Engineering

A Quick Hands-on





Thank You!