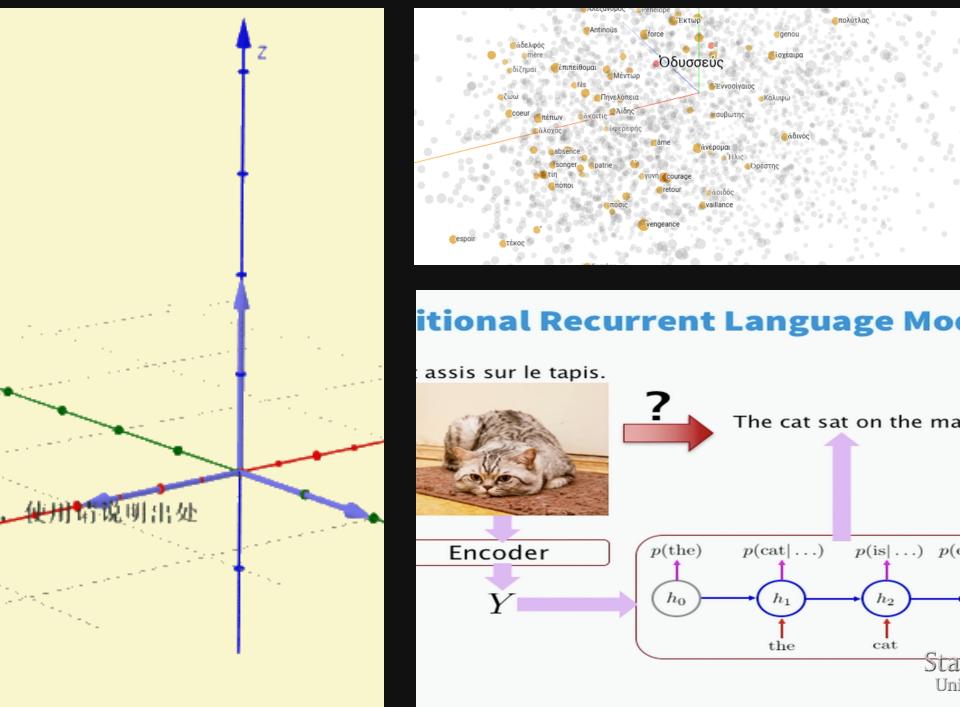
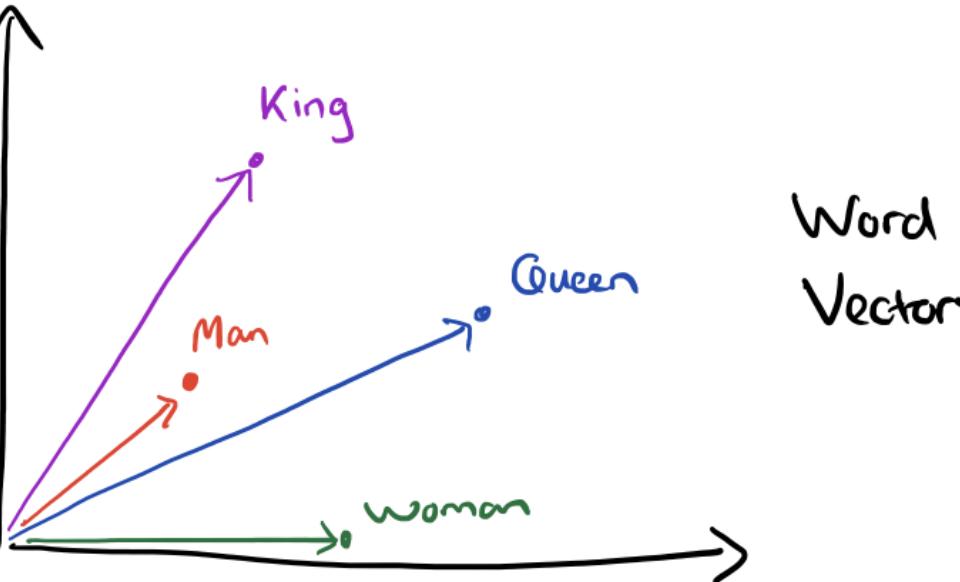


# { LLM & SHS }

## Initiation



# Rappel des bases

# quelques rappels des fondements des transformers

# Rappel des bases 1 : les réseaux de neurones

vidéo explicative

# Rappel des bases 2 : les embeddings

*...government debt problems turning into banking crises as happened in 2009...*

*...saying that Europe needs unified banking regulation to replace the hodgepodge...*

*...India has just given its banking system a shot in the arm...*

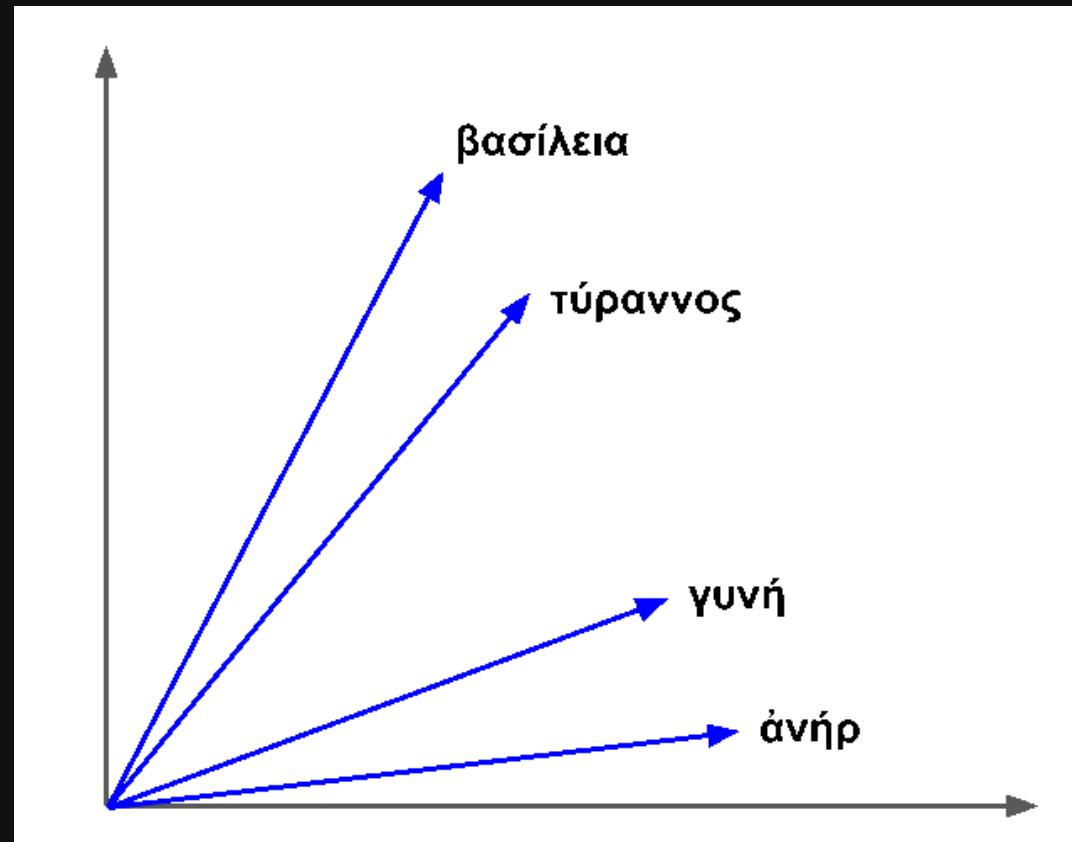


These context words will represent **banking**

**“You shall know a word by the company it keeps”**

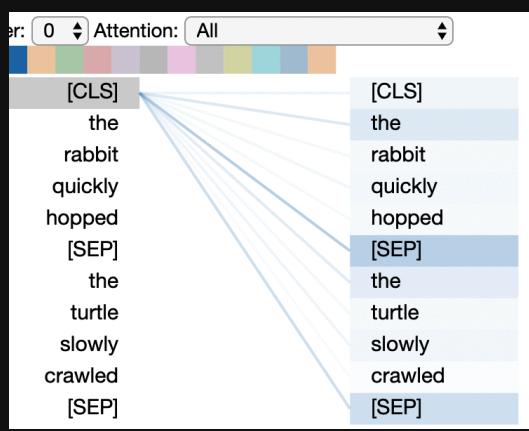
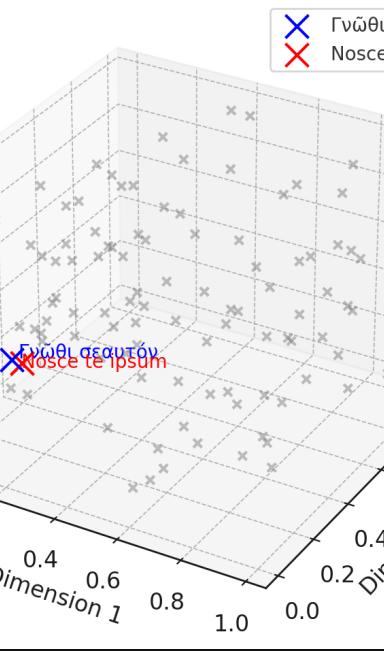
(Firth, J. R. 1957:11)

# Rappel des bases 2 : les embeddings





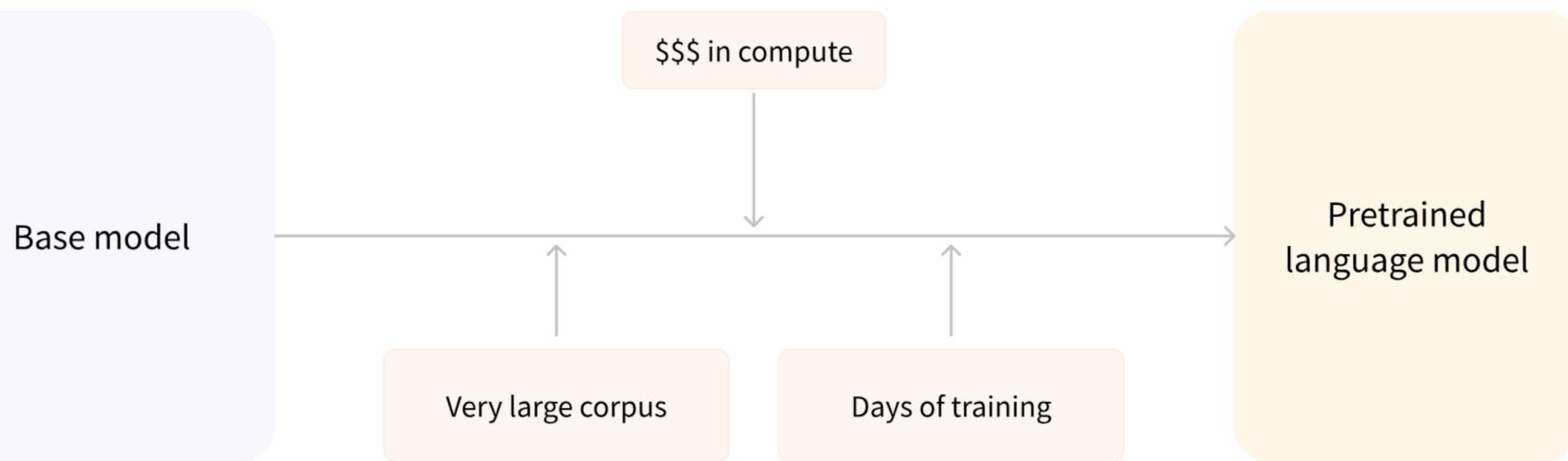
sation de l'espace sémantique



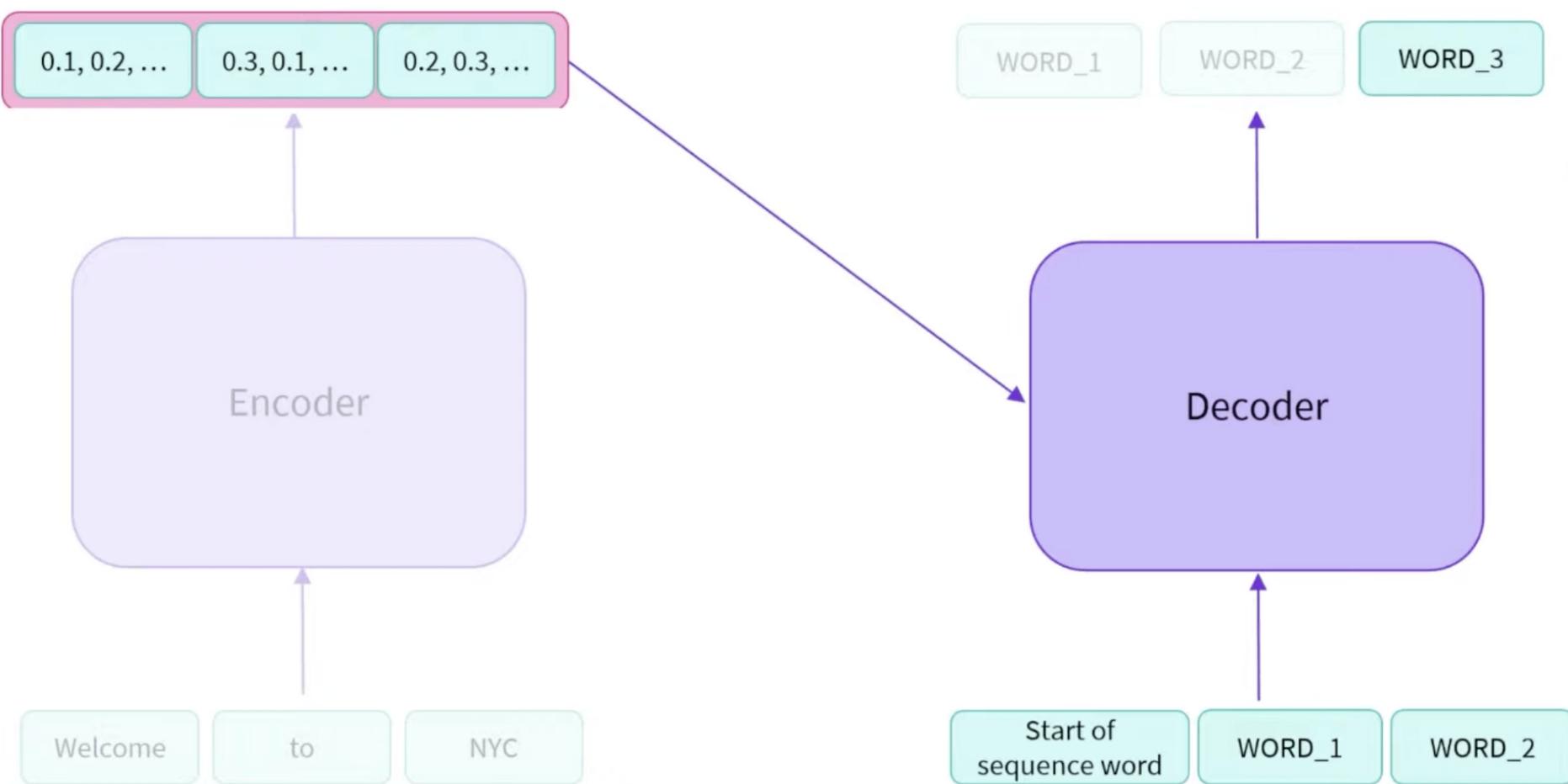
# Principes des transformers

## comment ils fonctionnent

# Structure globale des transformers



# Structure globale des transformers



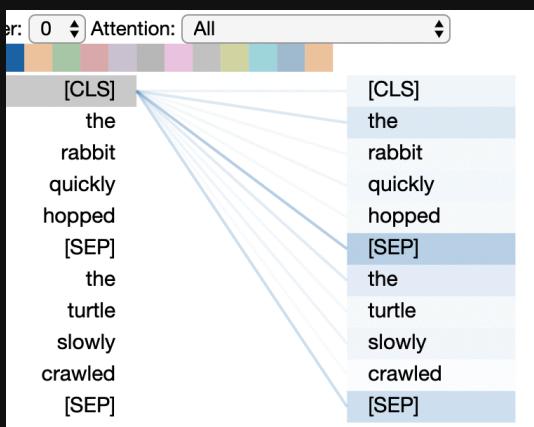
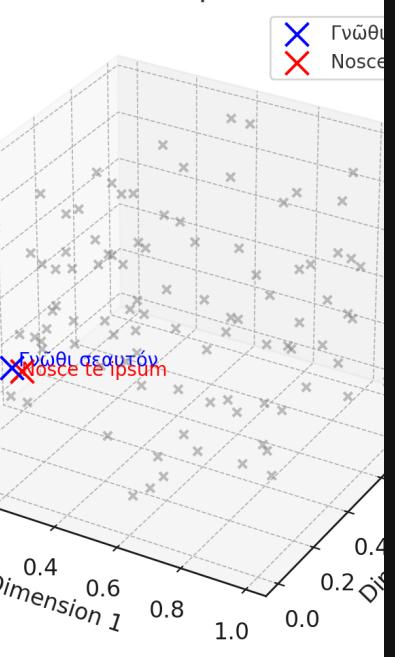
a teacher



a professor



sation de l'espace sémantique



# Les corpus et les biais

Pourquoi

# Midjourney 1

a teacher



a professor



# Midjourney 2

a doctor



a lawyer



# DALLE et SD

"intelligent person"



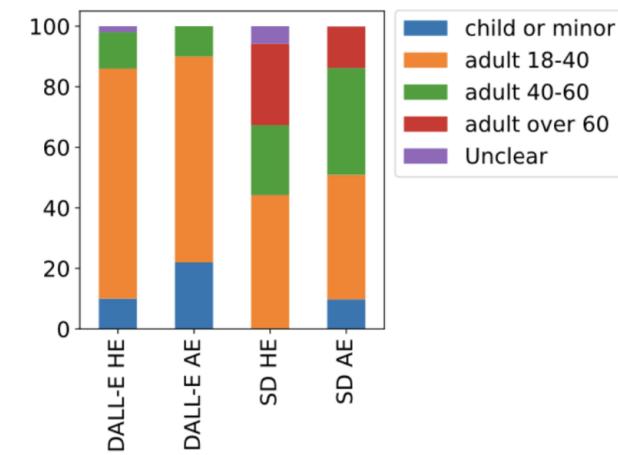
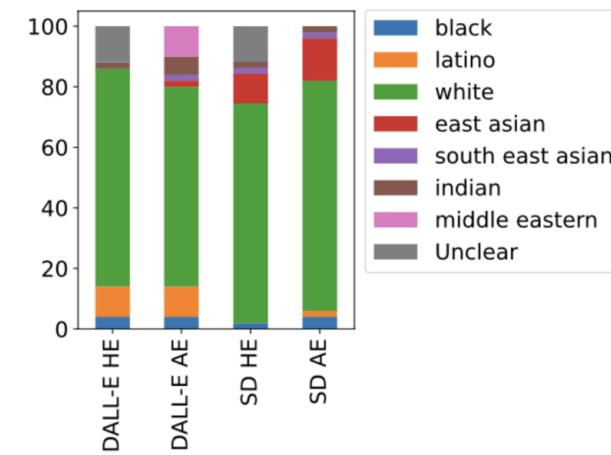
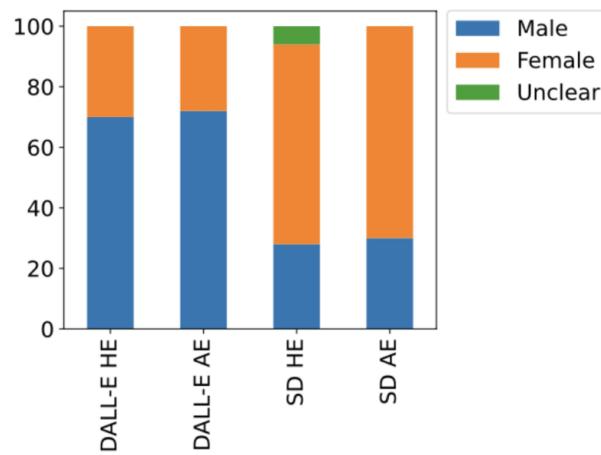
DALL-E



SD

# DALLE et SD

"person"



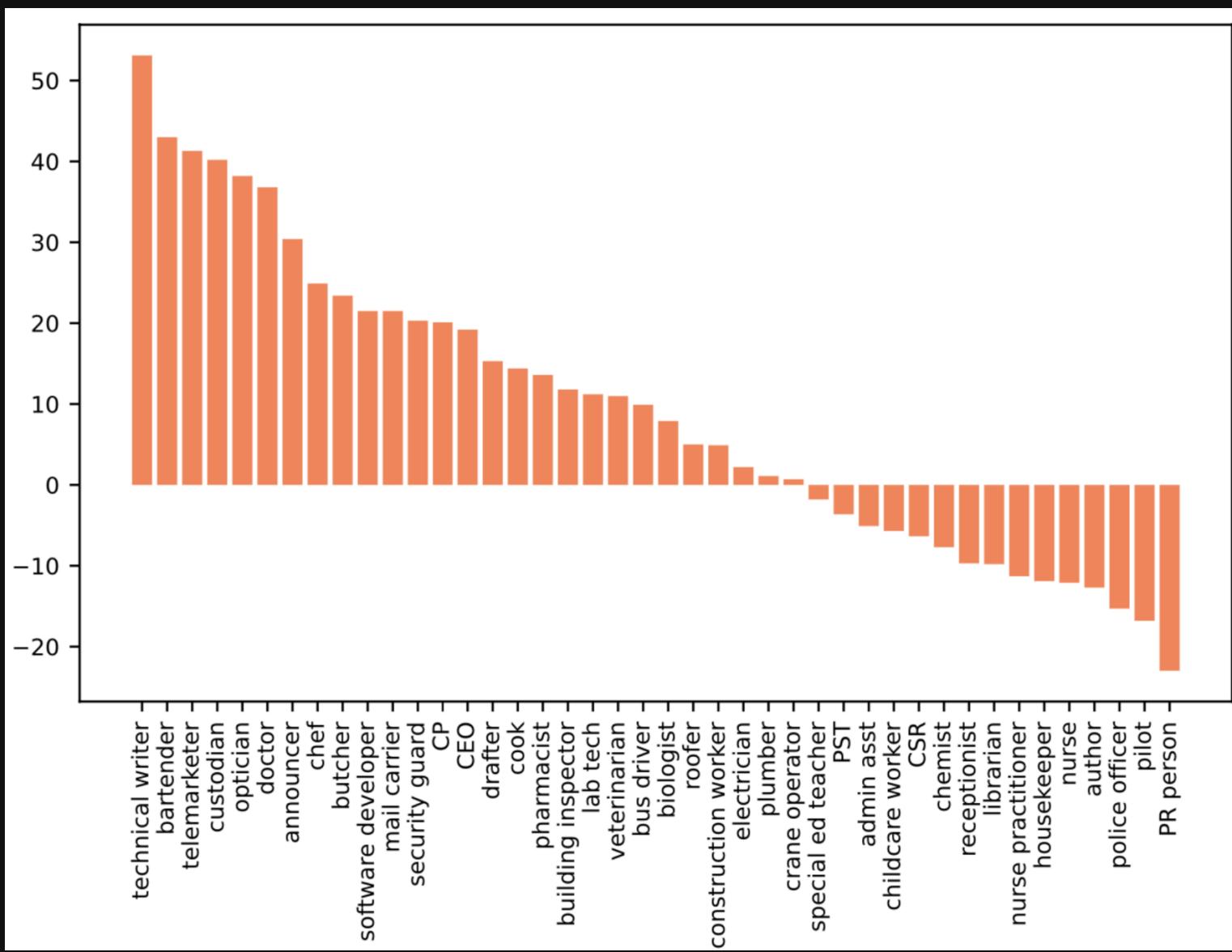
# DALLE

events	Nigeria	Ethiopia	PNG	India	Colombia	Mexico	Russia	Brazil	China	Australia	Germany	USA
birthday party	0.05	0.11	0.11	0.04	0.01	0.02	0.03	0.03	0.02	0.03	0.03	0.08
celebration	0.26	0.4	0.38	0.2	0.18	0.2	0.17	0.14	0.19	0.17	0.17	0.22
concert	0.16	0.18	0.22	0.06	0.05	0.05	0.01	0.02	0.05	0.04	0.03	0.03
demonstration	0.29	0.25	0.24	0.19	0.22	0.17	0.16	0.19	0.19	0.08	0.04	0.08
festival	0.24	0.25	0.22	0.09	0.08	0.06	0.04	0.03	0.03	0.13	0.09	0.07
protest	0.26	0.27	0.22	0.11	0.16	0.14	0.16	0.14	0.16	0.05	0.06	0.02
riot	0.24	0.22	0.26	0.12	0.17	0.16	0.16	0.16	0.14	0.12	0.17	0.16
wedding	0.18	0.21	0.2	0.14	0.05	0.11	0.03	0.03	0.07	0.06	0.03	0.02

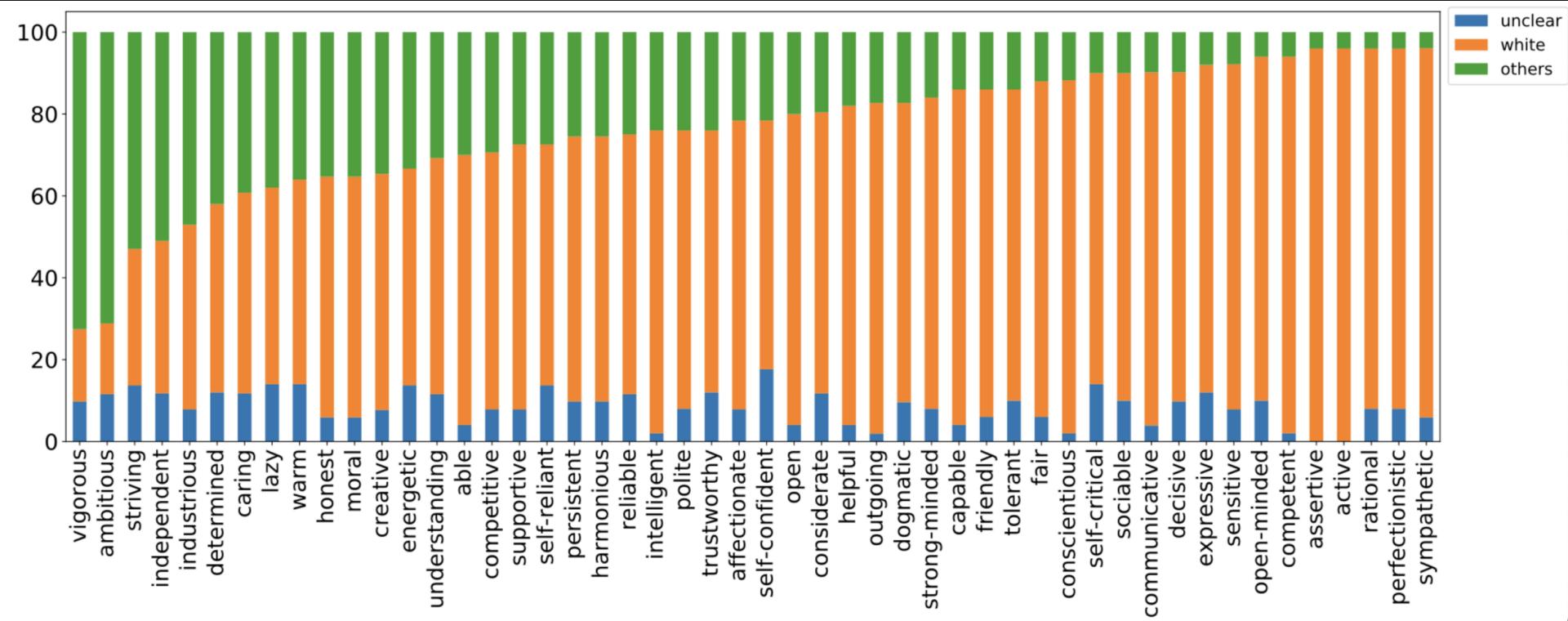
SD

events	Nigeria	Ethiopia	PNG	India	Colombia	Mexico	Russia	Brazil	China	Australia	Germany	USA
birthday party	0.31	0.28	0.25	0.28	0.07	0.06	0.08	0.05	0.16	0.04	0.04	0.02
celebration	0.44	0.31	0.34	0.32	0.34	0.22	0.3	0.29	0.26	0.17	0.29	0.25
concert	0.38	0.36	0.35	0.19	0.23	0.1	0.03	0.08	0.07	0.04	0.05	0.1
demonstration	0.38	0.33	0.33	0.36	0.31	0.25	0.26	0.31	0.27	0.15	0.23	0.13
festival	0.23	0.17	0.2	0.14	0.15	0.09	0.13	0.11	0.16	0.13	0.1	0.1
protest	0.29	0.28	0.25	0.3	0.23	0.15	0.16	0.19	0.18	0.07	0.14	0.04
riot	0.28	0.2	0.21	0.22	0.17	0.12	0.1	0.14	0.11	0.09	0.1	0.08
wedding	0.33	0.29	0.27	0.27	0.11	0.1	0.06	0.08	0.18	0.08	0.07	0.02

# DALLE



# Moyenne DALLE SD



# SD avant amendement : plus accessible

**Stable Diffusion 2 Demo**

Stable Diffusion 2 is the latest text-to-image model from StabilityAI. [Access Stable Diffusion 1 Space here](#)  
For faster generation and API access you can try [DreamStudio Beta](#).

kids at juvenile prison

Generate image

# Eventuelle expérience annexe

biais dans les vecteurs

# Expériences avec les transformers

Les bases des transformers :

[https://github.com/OdysseusPolymetis/ia\\_et\\_shs/blob/main/1\\_transformers\\_basics.ipynb](https://github.com/OdysseusPolymetis/ia_et_shs/blob/main/1_transformers_basics.ipynb)

# Expériences avec les transformers

Les bases des transformers :

Le posttagging

# Expériences avec les transformers

Les bases des transformers :  
la NER

# Expériences avec les transformers

Les bases des transformers :  
l'analyse de sentiment

# Expériences avec les transformers

Les bases des transformers :  
l'affinage

# Expériences avec les transformers

Test sur les biais dans ChatGPT2