



We are



MLEAFIT

Main contributors

Daniel Cano

Daniel Arango

Juan Esteban Castro

Juan Jose Moreno

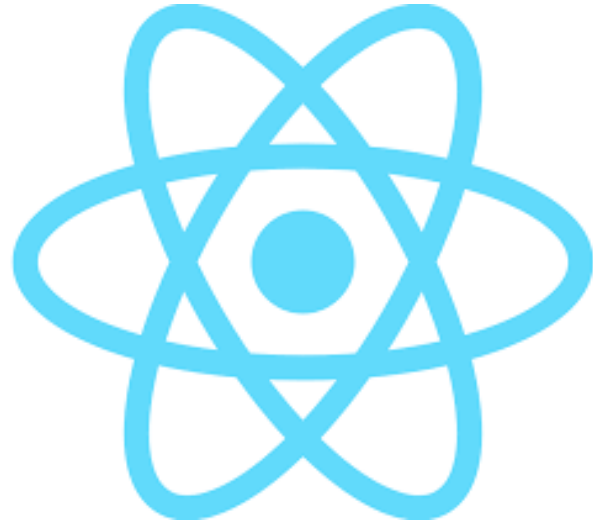
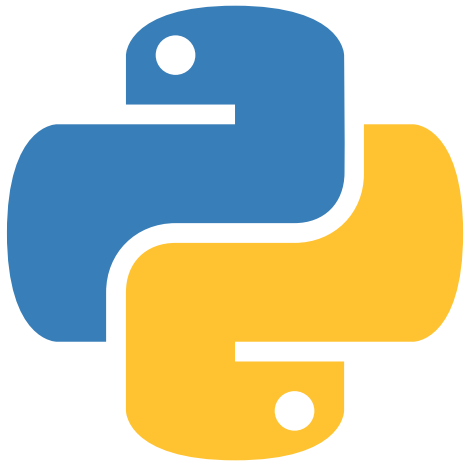
Juan David Martinez



INDEX

- What is Glovoz
- Architecture
- How is Glovoz made
- Machine Learning
- Applications of Glovoz
- Conclusions

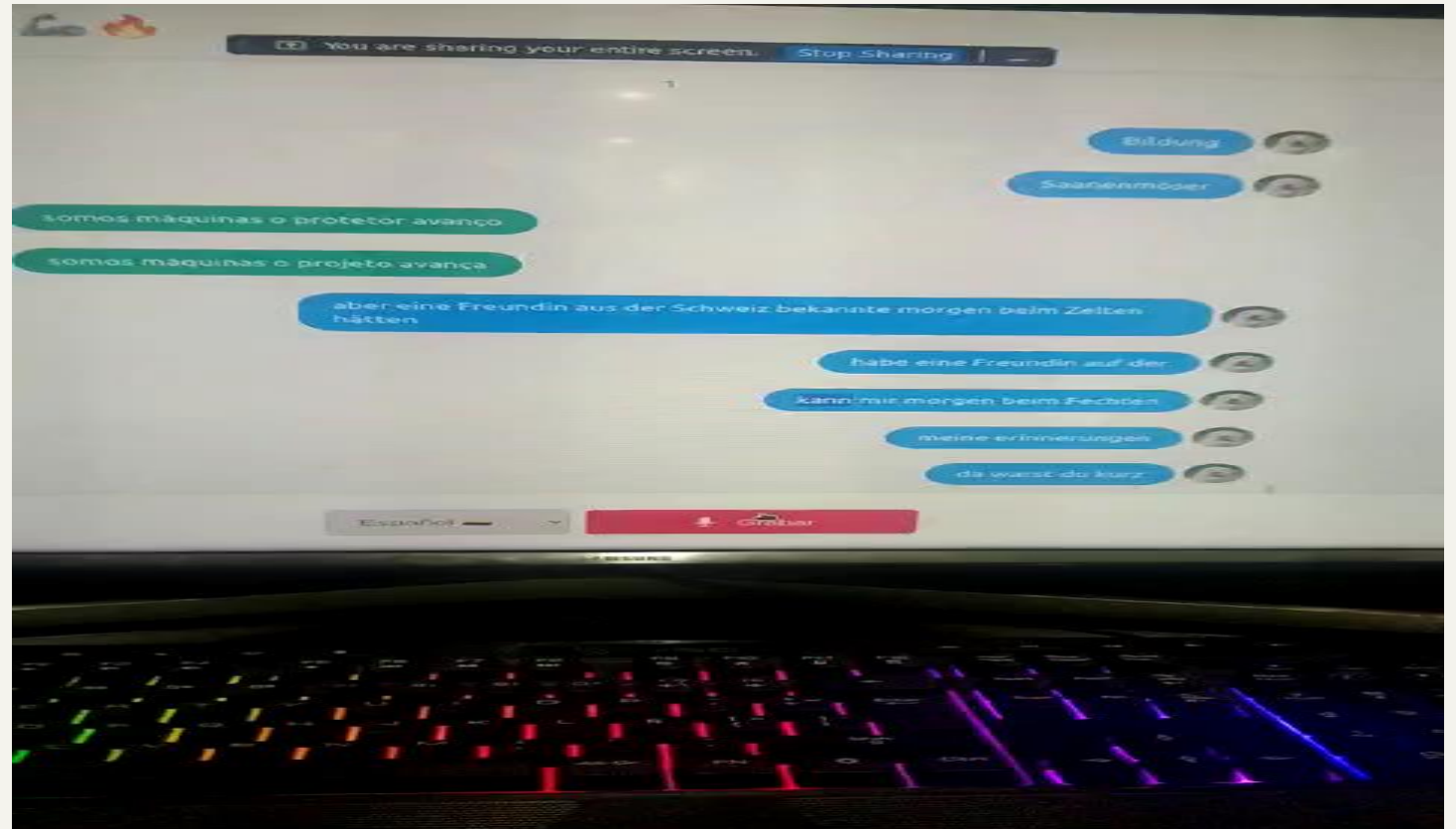
Frameworks used in Glovoz



Flask



Glovoz Overview



https://youtube.com/shorts/gswaLZHbZAI?si=IFNm4ugmwqcP_aoS

What is Glovoz?

- **Glovoz:** Multilingual voice-to-voice Multi-translator system that breaks language barriers for seamless global communication in today's interconnected world.



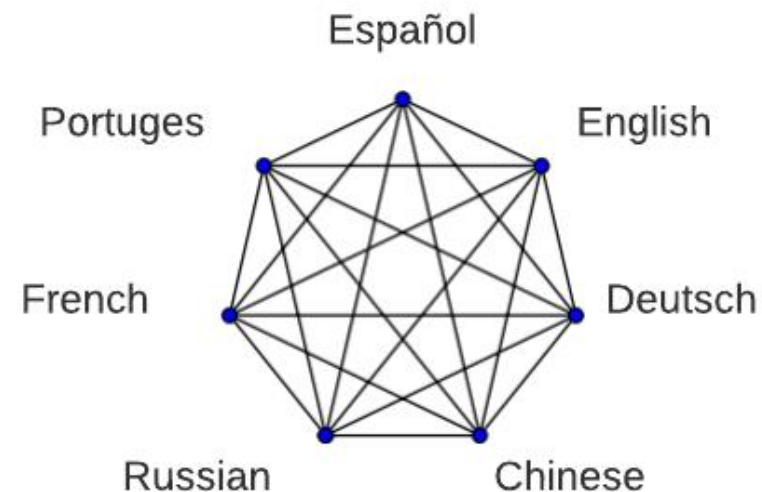
most common words in
our readme

What is Multi-translation

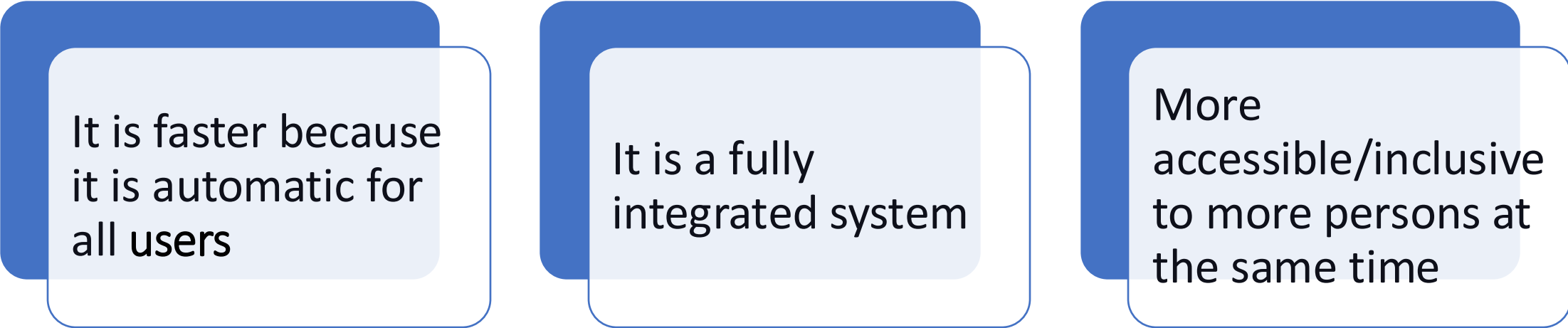
Translation

Español ↔ Portuguese

Multi-translation



Why is it better than standard translation systems?

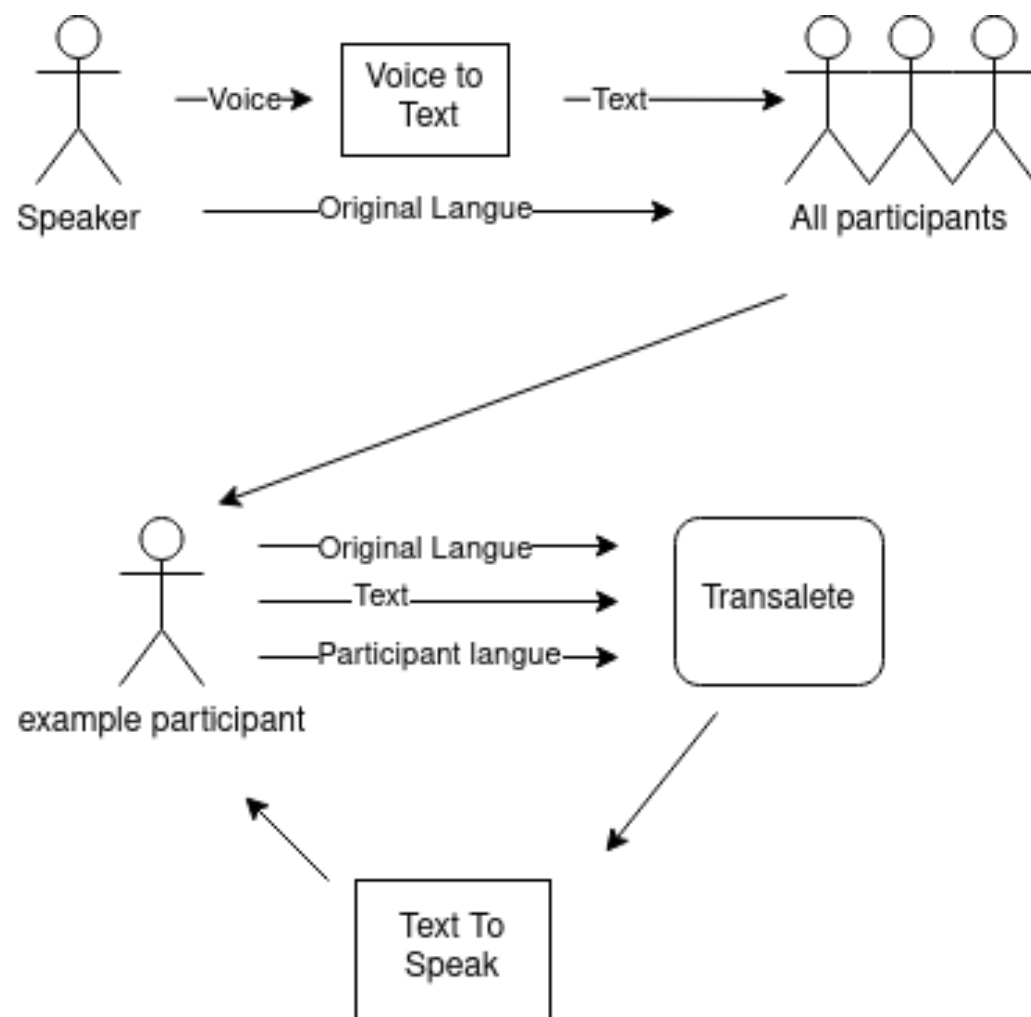


It is faster because
it is automatic for
all users

It is a fully
integrated system

More
accessible/inclusive
to more persons at
the same time

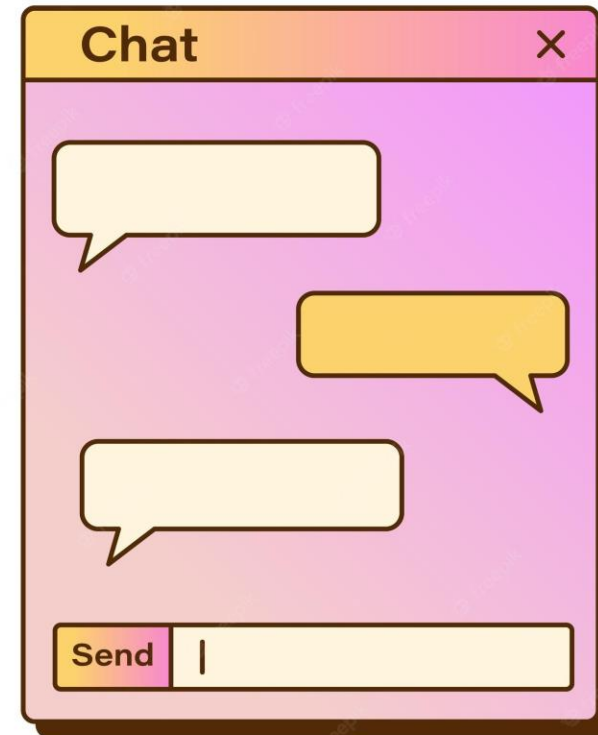
Application Pipeline



Architecture

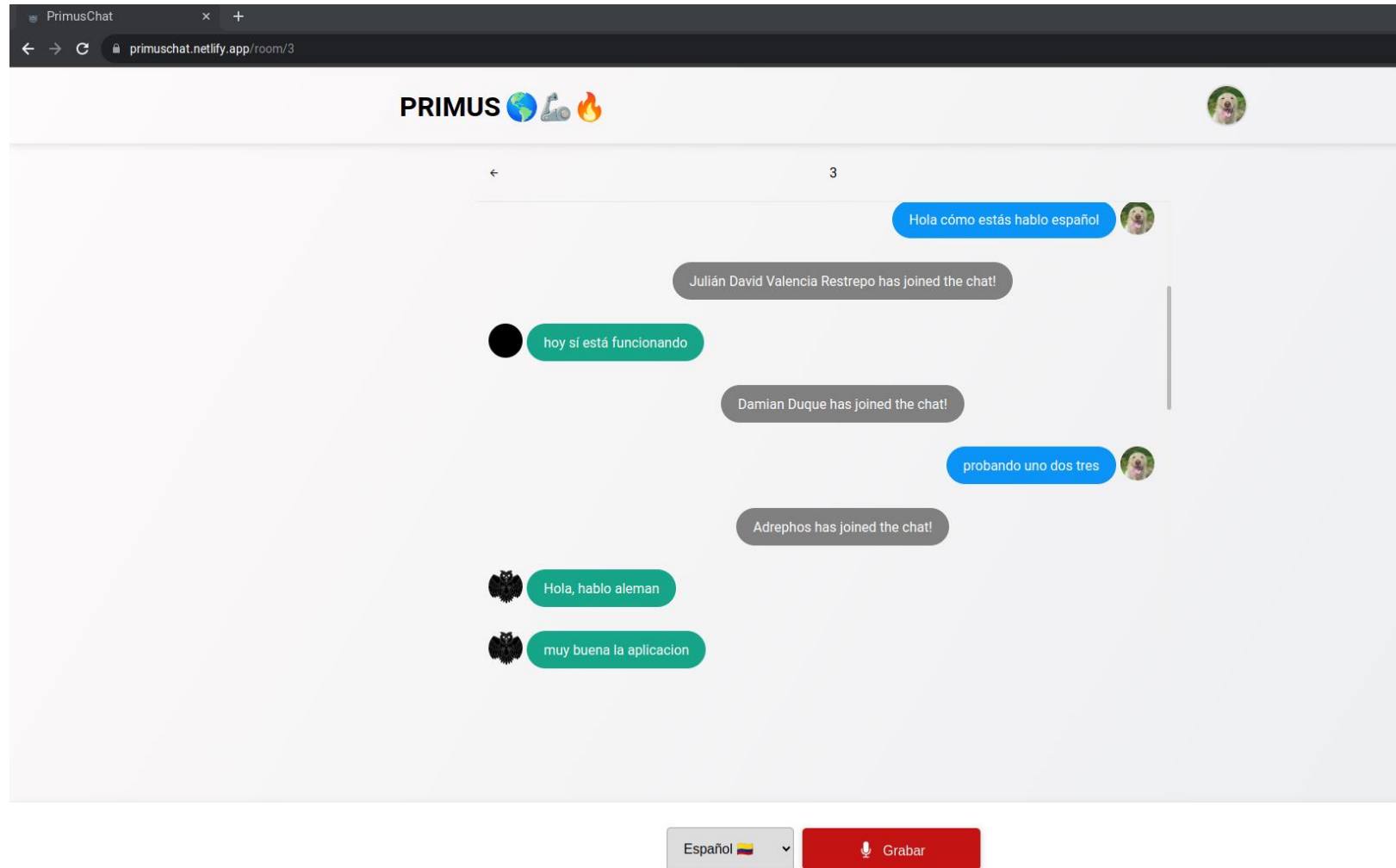
Why is it designed like a chat?

- Scalability
- Middleware
- Real-Time Interaction
- Efficiency
- Message Flow



Frontend

- User-Friendly Interface
- Real-Time Interaction
- Accessibility



Backend

- Receive data
- Translate
- Send it again



Why do we need machine
learning to translate?

- Why don't we use APIs?



Being an
accurate
translation
service

Being so
broken
shakespeare
would be
jealous

But why transformers?

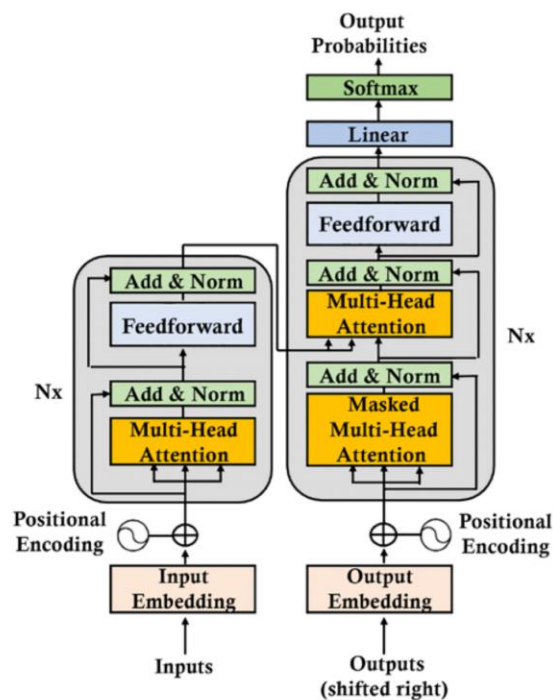
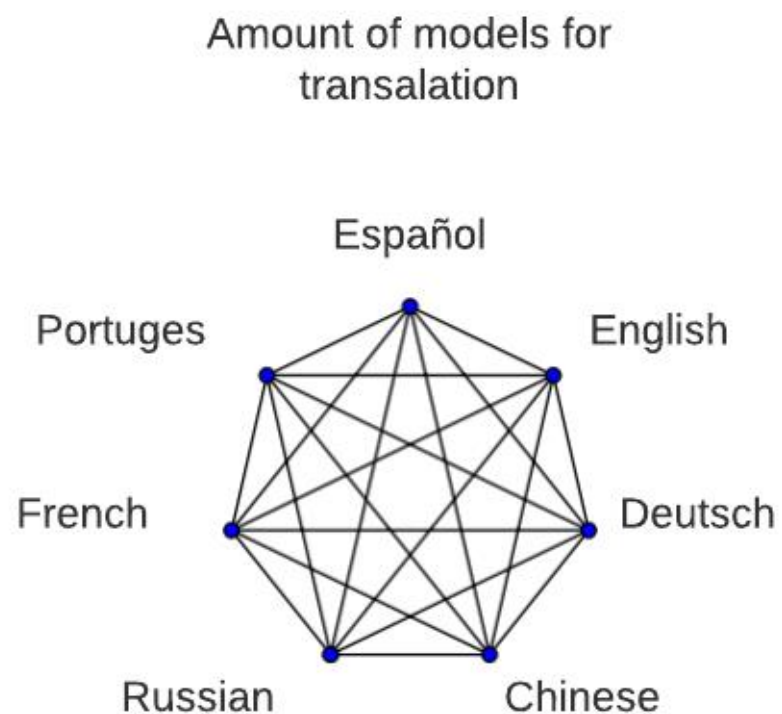


Table 2: The Transformer achieves better BLEU scores than previous state-of-the-art models on the English-to-German and English-to-French newstest2014 tests at a fraction of the training cost.

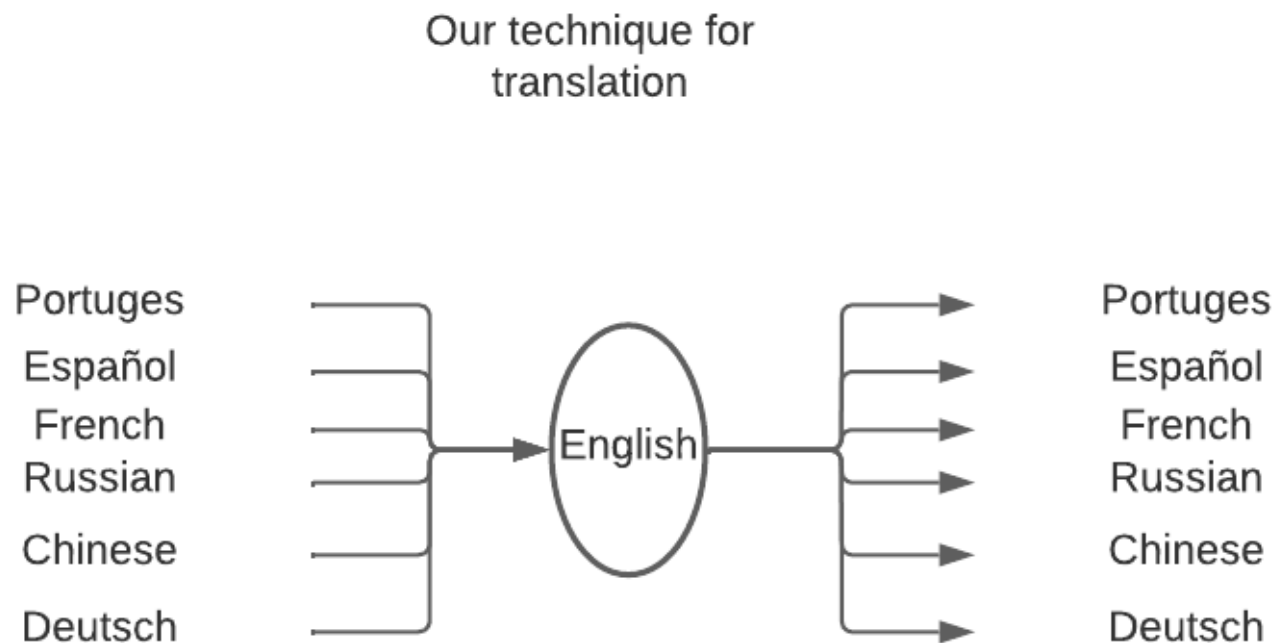
Model	BLEU		Training Cost (FLOPs)	
	EN-DE	EN-FR	EN-DE	EN-FR
ByteNet [18]	23.75			
Deep-Att + PosUnk [39]		39.2		$1.0 \cdot 10^{20}$
GNMT + RL [38]	24.6	39.92	$2.3 \cdot 10^{19}$	$1.4 \cdot 10^{20}$
ConvS2S [9]	25.16	40.46	$9.6 \cdot 10^{18}$	$1.5 \cdot 10^{20}$
MoE [32]	26.03	40.56	$2.0 \cdot 10^{19}$	$1.2 \cdot 10^{20}$
Deep-Att + PosUnk Ensemble [39]		40.4		$8.0 \cdot 10^{20}$
GNMT + RL Ensemble [38]	26.30	41.16	$1.8 \cdot 10^{20}$	$1.1 \cdot 10^{21}$
ConvS2S Ensemble [9]	26.36	41.29	$7.7 \cdot 10^{19}$	$1.2 \cdot 10^{21}$
Transformer (base model)	27.3	38.1	$3.3 \cdot 10^{18}$	
Transformer (big)	28.4	41.8	$2.3 \cdot 10^{19}$	

Models complexity $K(K-1)$



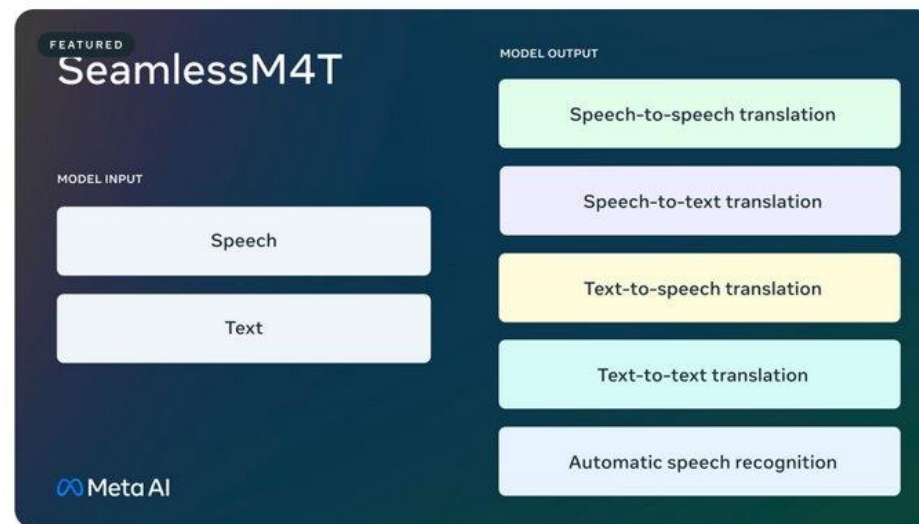
$K_1: 0$	$K_2: 2$	$K_3: 6$	$K_4: 12$
$K_5: 20$	$K_6: 30$	$K_7: 42$	$K_8: 56$
$K_9: 72$	$K_{10}: 90$	$K_{11}: 110$	$K_{12}: 132$

How can we reduce the amount of models?



SeamlessM4t changed all

The latest from Meta AI



Natural Language Processing

Bringing the world closer together with a foundational multimodal model for speech translation

SeamlessM4T provides high-quality translation, allowing people from different linguistic communities to communicate effortlessly through speech and text.

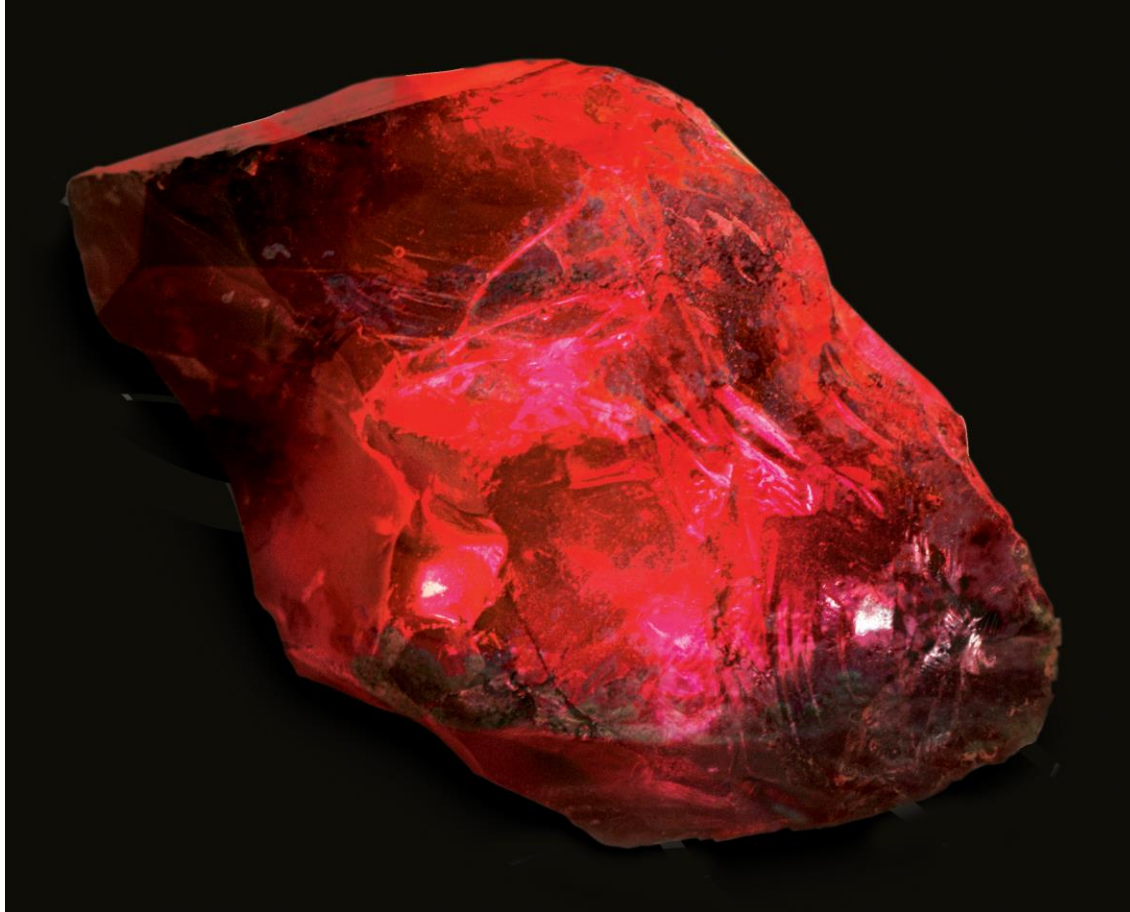
August 22, 2023

Applications NEVER ENDS!!!



- International Conferences and Symposia
- Entertainment and Media
- International Sporting Events
- Emergency Response and Humanitarian Aid
- International Court Cases
- Academic and Educational Exchange Programs
- Tourism and Travel Industry
- International NGOs and Nonprofits
- International News Reporting

Conclusions



Glovoz is a powerful tool and a key to reducing language barriers

Glovoz can revolutionize the way we translate into a future

Thanks, we going continue working
at Glovoz



<https://github.com/Semillero-Inteligencia-Artificial-EAFIT/Glovoz>