

LanguageAI™

Steps in the process:

Intake Automation

AI analyzing customer content

Pre-translation

AI optimizing source content

MT Customization + Model Fine-Tuning

AI-optimized data used for MT training and LLM fine-tuning

AI Translation

Custom MT Engine and AI-powered Translation Memory

Automated Post-Editing

Rules, AI Glossary Replacement, and AI stylistic choices

AI Workflow Decision

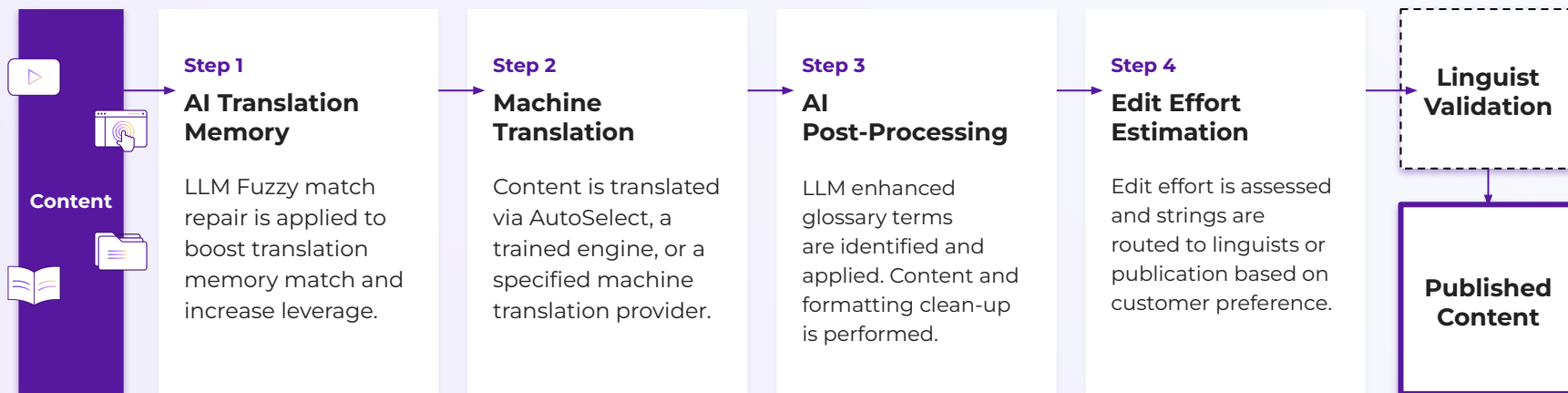
AI level of effort predictions and decisions



AI-powered Human Translation and Quality Evaluation

AI Translation Toolkit: How it works

Steps in the process:



AI Translation Toolkit: Early results

200%

**Reduction in
active linguist time**

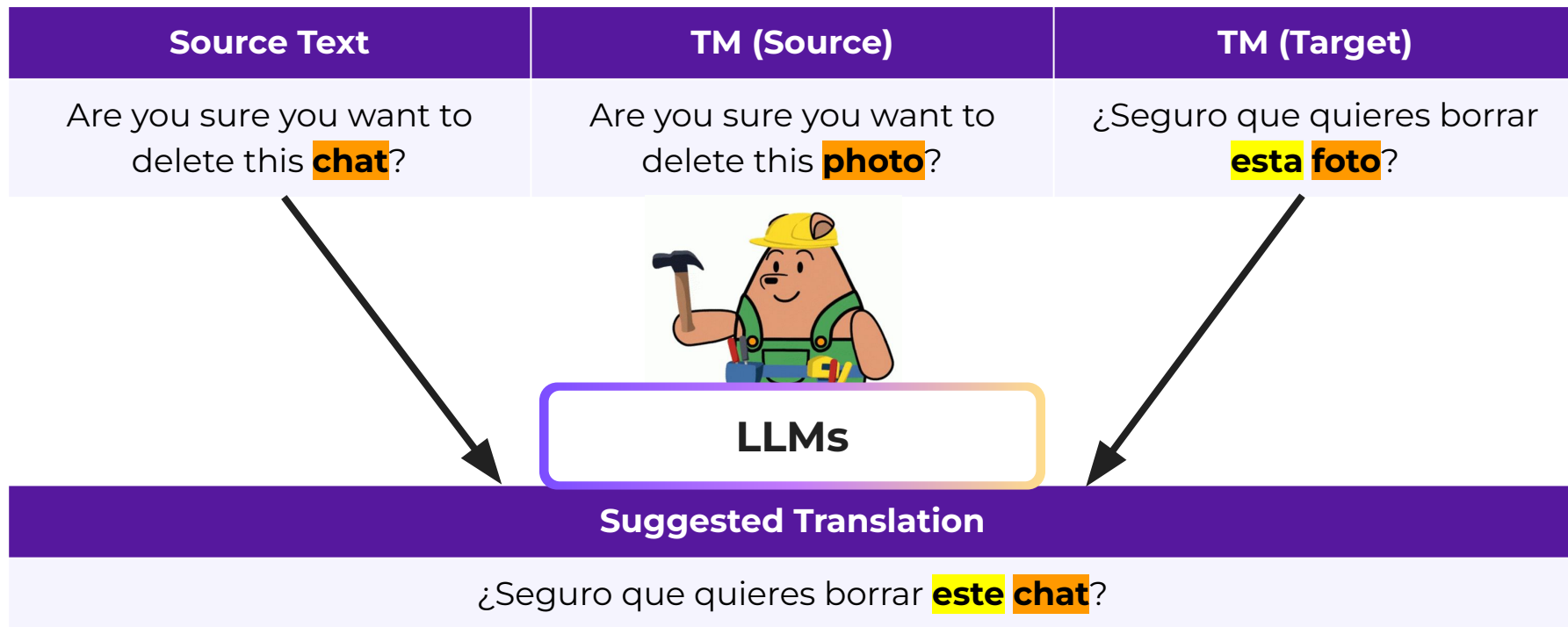
15%+

**Decrease in
number of edits**

98+

**MQM score when paired
with human validation**

Fuzzy Match Repair



Fuzzy Match Repair LLM bake-off

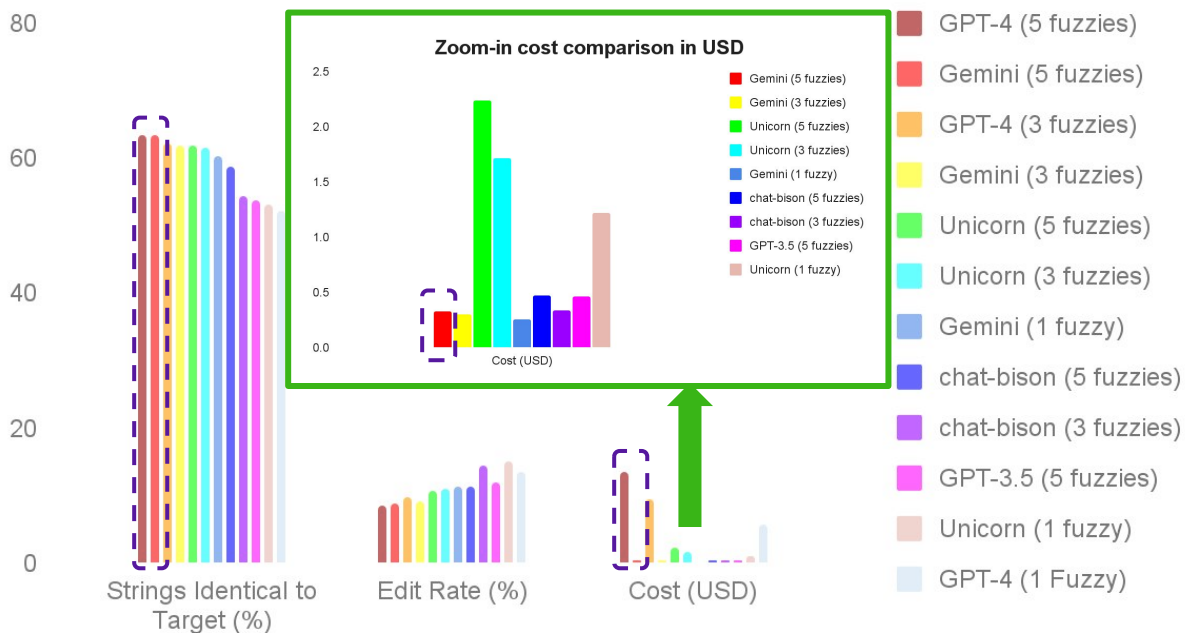
Task: Fuzzy Match Repair

Providing the prompt with similar examples in the clients TM to yield the desired translation to the current source text.

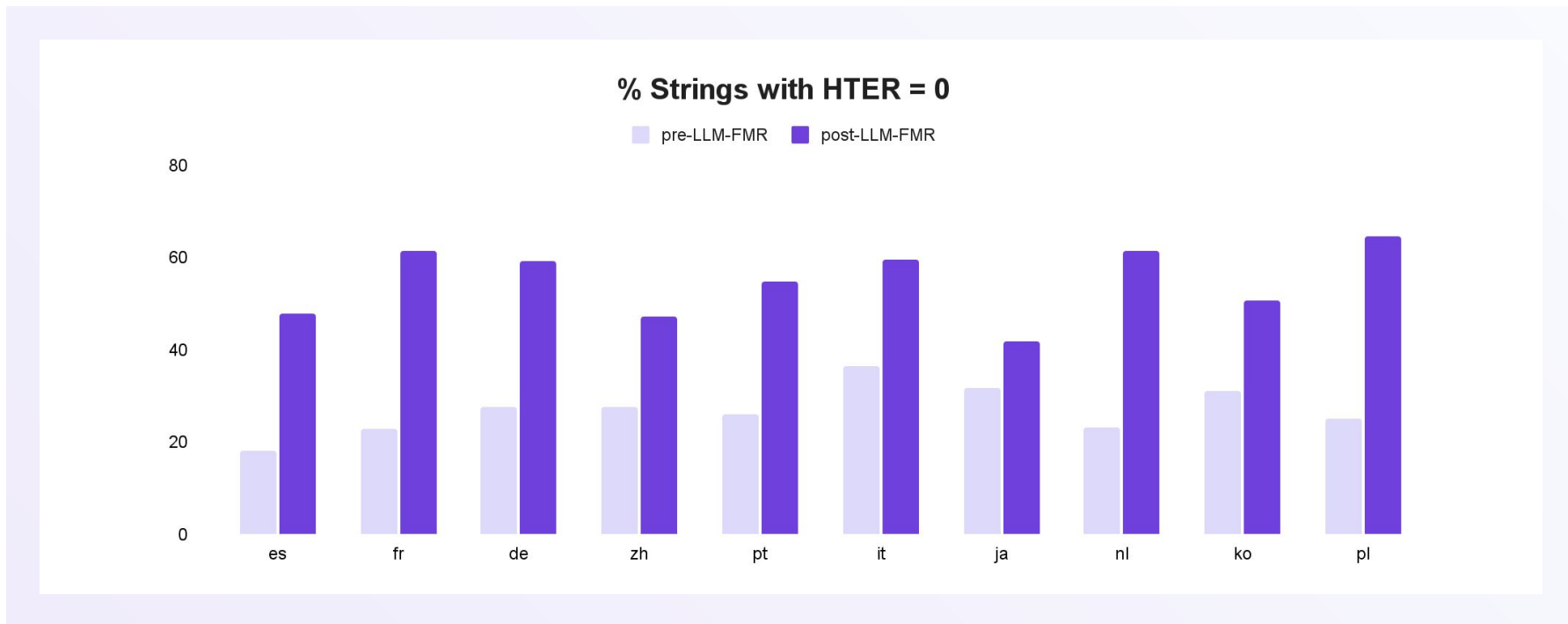
Results:

Google's models yielded the best performance-cost tradeoff. Compared to a competitor's most competitive model, Google's Gemini yielded the same % strings identical to target translation while being 40 times cheaper in price!

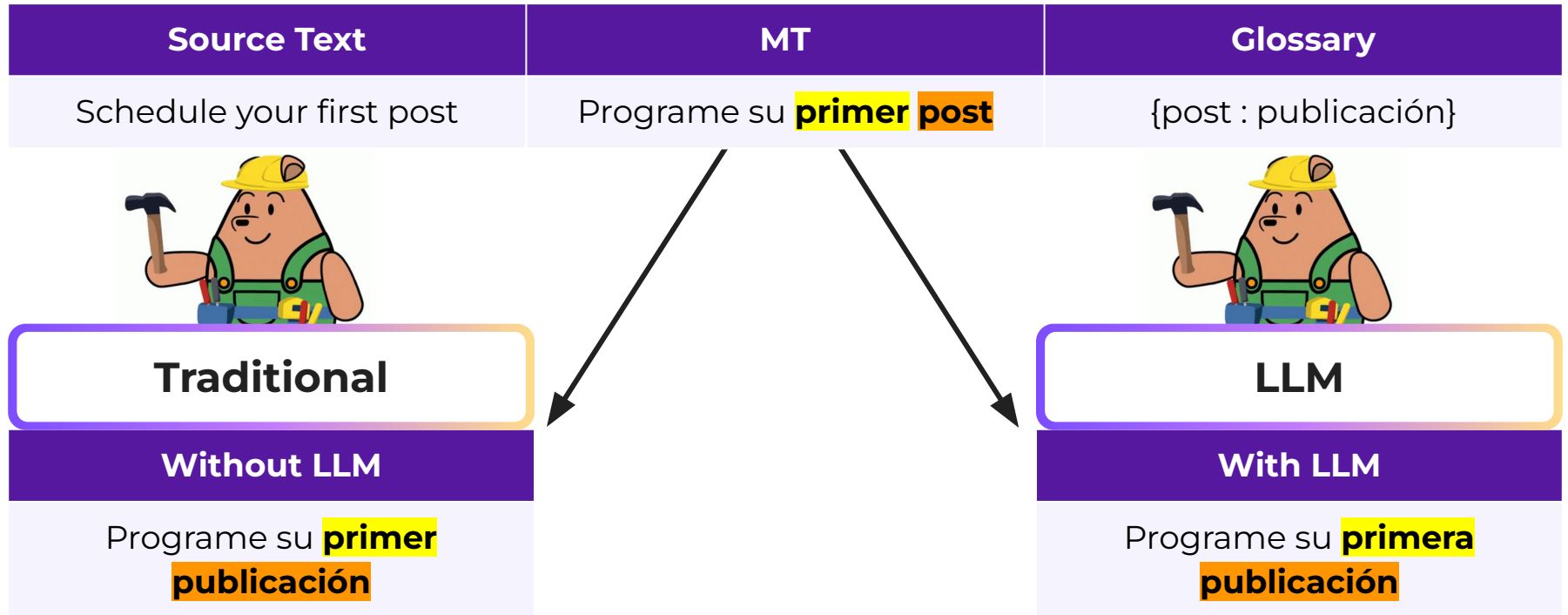
Top performers for Fuzzy Match Repair (zh-CN)



Fuzzy Match Repair: In-Prod Performance



Glossary insertion



Glossary insertion: Case in point

Coverage

% Strings containing target terms <u>without</u> glossary insertion	% Strings containing target terms <u>with</u> glossary insertion
67%	96%

Quality

Locales	Without LLM	With LLM
	Morphologically correct insertions (%)	Morphologically correct insertions (%)
ru	62%	78%
es	80%	94%

*Quality is assessed with human evaluators

Edit Effort Estimation

Small Files Project - Test File

Search Reset Actions

58 Source Strings (4,320 Words) for **Edit Effort Estimation** Save Search

Source String	Translation
<input type="checkbox"/> Interface. Namespace: test_eee_march_26.txt	rapidement du contenu traduit et localisé dans leur plate-forme Akeneo, le dans une interface centralisée et conviviale. Edit Translation Edit Effort Estimation: Level 2
<input type="checkbox"/> The new partnership between Smartling and Akeneo has resulted in an app that integrates both platforms, streamlining the automation and management of multilingual product information. By combining Akeneo solutions with Smartling's translation management system, brands, distributors and retailers are able to reduce manual processes, improve translation quality and accelerate time to market for global product launches. Akeneo users can easily send product data to Smartling and quickly receive translated and localized content back into their Akeneo platform, all within a centralized and user-friendly interface. Namespace: test_eee_march_26.txt	Le nouveau partenariat entre Smartling et Akeneo a donné naissance à une application qui intègre les deux plateformes, rationalisant ainsi l'automatisation et la gestion des informations multilingues sur les produits. En combinant les solutions Akeneo avec le système de gestion de la traduction de Smartling, marques, les distributeurs et les détaillants sont en mesure de réduire les processus manuels, d'améliorer la qualité de la traduction et d'accélérer le sur le marché des lancements de produits à l'échelle mondiale. Les utilisateurs d'Akeneo peuvent facilement envoyer des données produits à Smartling et recevoir rapidement du contenu traduit et localisé sur leur plateforme Akeneo tout au sein d'une interface centralisée et conviviale. Edit Effort Estimation: Level 3
<input type="checkbox"/> The new partnership between Smartling and Akeneo has resulted in an app that integrates both platforms, streamlining the automation and management of multilingual product information. By combining Akeneo solutions with Smartling's translation management system, brands, distributors and retailers are able to reduce manual processes, improve translation quality and accelerate time to market for global product launches. Akeneo users can easily send product data to Smartling and quickly receive translated and localized content back into their Akeneo platform, all within a centralized and user-friendly interface. Namespace: test_eee_march_26.txt	Smartling et Akeneoの新しいパートナーシップにより、両方のプラットフォームを統合したアプリが誕生し、多言語の製品情報の自動化と管理が合理化された。AkeneoのソリューションとSmartlingの翻訳管理システムを組み合わせたことで、ブランド、流通業者、小売業者は、手作業によるプロセスを減らし、品質を向上させ、グローバルな製品発売の市場投入までの時間を短縮することができます。Akeneoユーザーは、製品データをSmartlingに簡単に送信し、およびアップロードされたコンテンツをAkeneoプラットフォームにすばやく返すことができます。 Edit Effort Estimation: Level 3
<input type="checkbox"/> The new partnership between Smartling and Akeneo has resulted in an app that integrates both platforms, streamlining the automation and management of multilingual product information. By combining Akeneo solutions with Smartling's translation management system, brands, distributors and retailers are able to reduce manual processes, improve translation quality and accelerate time to market for global product launches. Akeneo users can easily send product data to Smartling and quickly receive translated and localized content back into their Akeneo platform, all within a centralized and user-friendly interface. Namespace: test_eee_march_26.txt	Новое партнерство между Smartling и Akeneo привело к созданию приложения, которое объединяет обе платформы, оптимизирует автоматизацию и управление многоязычной информацией о продуктах. Объединение решений Akeneo с системой управления переводами Smartling, дистрибуторы и розничные продавцы могут сократить ручные процессы, повысить качество перевода и ускорить вывод продукта на рынок по всему миру. Пользователи Akeneo могут легко отправлять данные о продуктах в Smartling и быстро получать переведенный и локализованный контент обратно на свою платформу Akeneo, и все это в централизованном удобном интерфейсе. Edit Effort Estimation: Level 1

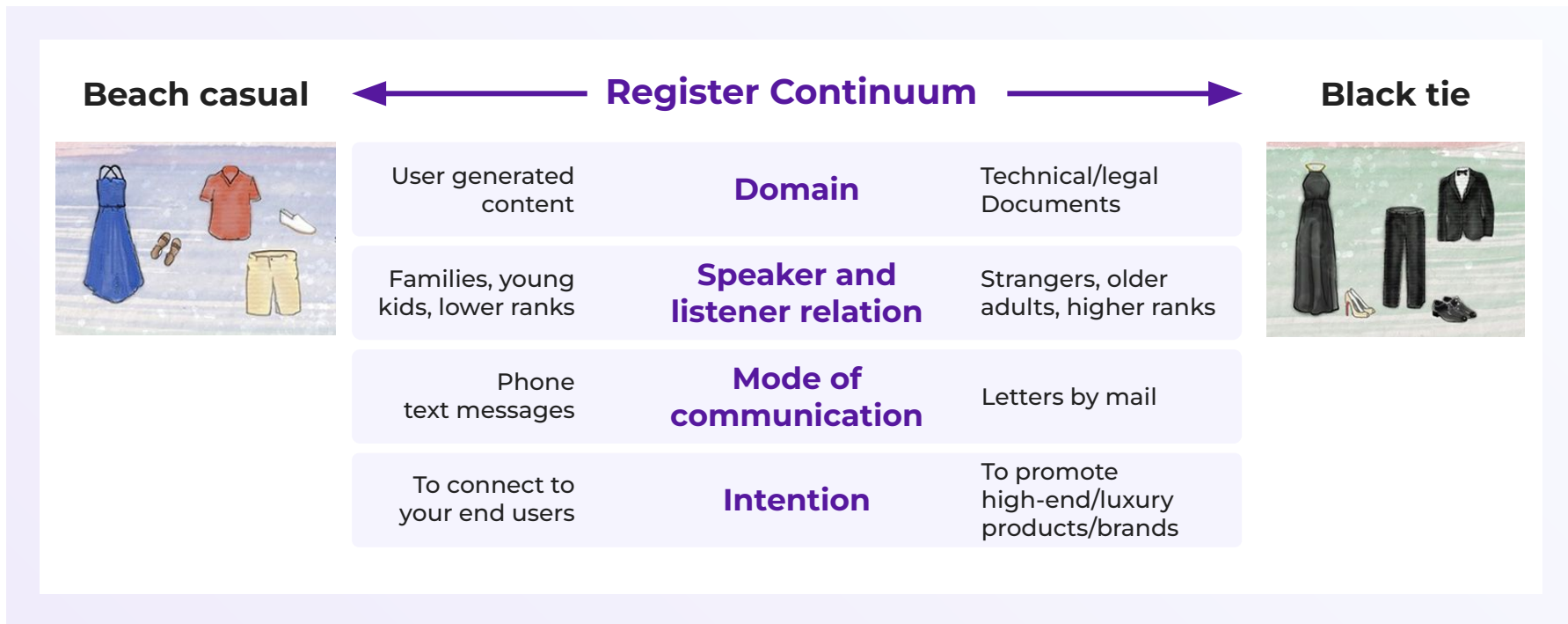


Fine-tuned EEE
+ 13% accuracy over general EEE

General EEE in AI toolkit
+ 40% accuracy over random

Random guess for level of effort

Formality register is a continuum



LLM for minimalistic register conversion

Task: Register Conversion

(Formal to Informal) on PaLM:
completion-bison

Success Criteria:

Convert formal strings to the informal register:

- With proper conjugations of the affected verbs, adjectives, nouns, etc.
- Without changing the tone and other word choices in the translation to make it overly informal.

Locales	% successful conversion	Remaining Issues
es-ES	95%	<ul style="list-style-type: none">• Strings containing self-reflective verbs are not properly converted• Gender of original string not respected
de-DE	85%	<ul style="list-style-type: none">• Imperatives with the second person pronoun in the beginning of the string are not properly converted while the rest of the strings are, resulting in mixed formality
fr-FR	80%	<ul style="list-style-type: none">• Imperatives with the second person pronoun in the beginning of the string are not properly converted• Many strings became too informal due to truncation of the second person pronoun and the associated verb