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| RESEARCH ARTICLE

Can Artificial Intelligence (AI) Translate Arabic Abu-Brand Names with Different Prompts

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ABSTRACT

In addition to "father", أبو "Abu" in Arabic has several meanings, and is used in many contexts, including brand names. Despite their widespread use, there is a lack of studies that focus on the translation of Abu-brand names by Artificial Intelligence (AI). Therefore, this study investigated the translation of Abu-brand names by Microsoft Copilot (MC) and DeepSeek (DS) in terms of accuracy, translation strategies, causes of faulty equivalents and whether stakeholders can depend on Al in translating Abubrand names. A sample of 100 Abu-brand names was collected and translated by MC and DS using three different tasks. In the three tasks, MC gave literal word-for-word translations of all 100 brand names, where it translated Abu as "father of" and the following noun semantically, whether the prompt specified the phrase type or not and whether each brand name was associated with the product name or not. Like MC, DS gave a literal word-for-word translation of all the brand names in tasks 1 and 2. However, when the product name was added, DS treated the brand names as Proper Nouns and transliterated them all in English regardless of whether they were coined by the manufacturers, business owners or consumers. However, 66% of the transliterations by DS were correctly used, but 34% were not supposed to be transliterated as they were grassroots (folk-coined) brand names, based on the packaging image, not the original English brand name which some consumers find difficult to pronounce and remember as a result, they coin a nickname based on the image on the packaging. Instead, the original English brand name should have been given by Al as an equivalent in the case of grassroots brand-names (Tiger balm instead of Abu Nimr Ointment for ابه نمر مرهم). Other interesting findings were that MC and DS gave identical English equivalents to 83% of the items in tasks 1 and 2. Additionally, DS gave double equivalents to 14.5% of the items in set 1, and faulty annotations/explanations of the brand name that show extraneous inferences and faulty guesses based on kunyas and nicknames that do not match a commercial context. Recommendations for stakeholders and for improving the performance of Al in translating Arabic Abu-brand names are given.

KEYWORDS

Artificial Intelligence, Al translation, Product names, brand names with Abu, Arabic brand names, literal translation, word-forword translation, translation, grassroot brand names, manufacturer-crated brand names

| ARTICLE INFORMATION

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1. Introduction

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(بو صابر) "salt"; أبو نكد) a boy who keeps nagging; أبو ضابر a man of generosity). In Colloquial Arabic, it is used to identify an unknown person by describing أبو الكبر a man of generosity). In Colloquial Arabic, it is used to identify an unknown person by describing his/her physical appearance أبو مرة) Satan, أبو كعب Satan, أبو كعب أبو كعب Abu Lahab, أبو دغيم أبو كعب أبو نمر) Aku Jahl); in folk medicine to refer to pathological conditions (بو عضلات أبو عضلات أبو فاس أبو فاس أبو نمر) أبو نمر) Axe brand أبو عضلات أبو المالية (Abu does not mean father, but it is used as a prefix to express the origin, or anatomical location (Al-Jarf, 2017; Al-Jarf, 2025). Additionally, Abu is used in brand names أبو التاريخ father of history).

Despite the multiple uses of أبو Abu in general as well as specialized contexts, very few studies in the literature explored the semantic differences between "parents" and "mother and father" and their occurrence, denotative and connotative meanings in the Holy Quran (Shahrour, 1991); the translation of kinship terms in the Qur'An (Thawabteh, 2012); basic-level translations of kinship terms from Standard Arabic to English (Al Saleem, 2013); the translation of family and kinship terms in Arabic societies (Mohammed, Mohammed & Qassim, 2024); and student translators' ability to translate Abu-expressions from English to Arabic and Arabic to English (Al-Jarf, 2017). Lately, a study by Al-Jarf (2025) focused on the translation of folk medical terms containing lom and أم DeepSeek (DS).

Although issues related to brand names, shop names, product names, street signage and linguistic landscapes have been the focus of many studies in the literature, there is a lack of studies that focus on the translation of Arabic brand names containing Abu to English by Artificial Intelligence (AI). Therefore, this study aims to find out whether AI can correctly translate Arabic Abu-brand names to English. It aims to compare Microsoft Copilot (MC) and DeepSeek (DS) in terms of accuracy of the equivalents given, how they translate Arabic Abu-brand names in isolation, in context and with product identification, the translation strategies they use, the causes of translation errors and whether translation students, manufacturers and business owners can depend on AI in translating Arabic Abu-brand names to English. It also aims to explain the meaning of Abu in Arabic brand names, why Abu is more popular in Arabic brand names than ρ Om/Umm.

This research is significant because Arabic brand names with "Abu" often carry a cultural, or symbolic meaning that literal translation misses. Without proper handling, Al might reduce *Abu Walad* to "Father of the Boy," stripping away its identity as a beloved chocolate or cheese brand. It is also significant for avoiding misinterpretation. Many "Abu" names are folk nicknames or visual cues (like *Abu Asad* for Fucidin cream). Al needs to distinguish between literal names (أبو علي أور أبو علي for Axe brand ointment).

This study is significant for improving cross-cultural commerce. Accurate brand translation helps Arabic brands expand globally to ensure that foreign consumers understand what they are buying and to help importers, marketers, and regulators avoid confusion or mislabelling. It is beneficial for numerous stakeholders. It will help AI developers build smarter, culturally adaptive AI translation models, Arabic brand owners will ensure that brand identity is preserved across languages, global consumers get clearer understanding of product origins and meanings, e-commerce platforms will improve product listings and search accuracy, regulators and customs will avoid misclassification of imported goods, and linguists & researchers gain insight into how language and branding intersect and where AI can be used in Arabic brand name translation to English.

Moreover, this study will enhance Al's cultural intelligence. Arabic is rich in metaphors, idioms, and naming traditions. Researching "Abu" in branding helps Al systems become more culturally aware, not just linguistically accurate. It has real-world relevance. It will highlight how dialects, cultural nuance, and naming conventions pose unique challenges. The focus on "Abu" brand names fits squarely into this gap, where semantic precision meets cultural context.

Furthermore, this study is part of a series on studies by the author which investigated the translation of specialized terms, metaphorical and idiomatic expressions such as the translation of Arabic folk medical terms with om and abu by Microsoft Copilot and DeepSeek (Al-Jarf, 2025g); translation of the Gaza-Israel war terminology by Microsoft Copilot and Google Translate (Al-Jarf, 2025c); DeepSeek, Google Translate and Copilot's translation of Arabic grammatical terms used metaphorically (Al-Jarf, (2025d); translation of Arabic expressions of impossibility by Microsoft Copilot and student-translators (Al-Jarf, 2025e); translation of zero-expressions by Microsoft Copilot and Google Translate (Al-Jarf, 2025h); a comparative linguistic study of Microsoft Copilot and Google Translate in translating medical terms (Al-Jarf, (2024b); English-Arabic translation of technical terms by Google Translate (Al-Jarf, 2021a & Al-Jarf, 2016); translation educational polysemes in full-text Arabic research articles by Google Translate (Al-Jarf, 2025a); Arabic transliteration of borrowed English nouns with /g/ by Microsoft Copilot and Google Translate (Al-Jarf, 2025b).

On the other hand, this is part of a series of studies in which the author investigated a variety of linguistic, cultural, pragmatic promotional, sociocultural and globalization issues related to product names, shop names and linguistic landscapes such as pan Arab linguistic and translation errors and strategies in bilingual linguistic landscapes (Al-Jarf, 2025f); should Arabic product names be definite or indefinite (Al-Jarf, 2024a); English language representation in Korean linguistic landscapes (Al-Jarf, 2024b); when to translate Arabic and foreign shop names in Saudi Arabia (Al-Jarf, 2024c); semantic and syntactic anomalies in Arabic-transliterated compound shop names in Saudi Arabia (Al-Jarf, 2023); deviant Arabic transliterations of foreign shop names in Saudi Arabia and decoding problems that they cause among shoppers (Al-Jarf, 2022a); promotional, sociocultural and globalization reasons for the dominance of foreign shop names over Arabic names in Saudi Arabia (Al-Jarf, 2022b); and teaching English with linguistic landscapes to Saudi students studying abroad (Al-Jarf, 2021).

2. Definition of Terms

2.1 Microsoft Copilot

Copilot¹ is an Al-powered assistant developed by Microsoft, built on large language model (LLM) technology and enhanced by the Prometheus framework. It was originally launched as Bing Chat on February 7, 2023. Since then, it has evolved into Microsoft Copilot, expanding across platforms, including Edge, and mobile. It serves as Microsoft's primary successor to Cortana, offering a more advanced and versatile interface that resembles tools like ChatGPT, but with deeper integration into Microsoft's ecosystem. It is a general-purpose conversational Al designed to assist users with writing, research, translation, image analysis, and workflow optimization and allows users to analyze and interpret images and documents, generate creative visuals and engage in spoken dialogue and visual analysis. Today, Copilot is embedded in Windows 11 and Microsoft 365, where it assists with tasks such as summarizing, drafting documents, and analyzing spreadsheets.

2.2 DeepSeek

DeepSeek² (DS) is a Chinese AI research company that was founded in 2023 and has since released several AI models, including DeepSeek-V3 and R1, which are available for users for free. DS provides open-source LLMs that operate using advanced neural networks and machine learning algorithms to power its language processing capabilities. Its open-weight philosophy, cost-efficiency, and rapid innovation have positioned DeepSeek as a disruptive force in the global AI landscape, challenging dominant players like OpenAI and Meta. DS algorithms enable its models to adapt, process, and generate text with high accuracy and efficiency. Its neural systems are designed to enhance text understanding, generation, real-time processing and decision-making, making DeepSeek's systems offer a scalable and high-performance alternative that appeals to businesses and developers and researchers.

3. Data Collection and Analysis

A sample of 100 Arabic Abu-brand names were collected by searching Google and Google images for "حبنة أبو ", "مرهم أبو ", "معجون اسنان أبو ", "مرهم أبو ", "شوكولاتة أبو ", "شوكولاتة أبو ", "شاي أبو ", "صابون أبو ", "معجون اسنان أبو ", "بسكوت أبو ", "شوكولاتة أبو ", "شاي أبو ", "شاي أبو ", "صابون أبو ", "معجون اسنان أبو ", "شوكولاتة أبو ", "شوكولاتة أبو كاميرا، جوال أبو ثلاث كاميرات ، were not included in the sample. Names in which Abu is used to describe features of a product such as: بسكوت أبو سمسم، بسكوت ابو شوكولاتة، جوال أبو كاميرا، جوال أبو بصمة were excluded.

The sample included brand names referring to rice (35%); oil and ghee (25%); chocolate, chewing gum and cookies (14%); medicated ointments and creams (6%); toothpaste (4%); beauty products and soaps (7%); tea and milk (6%); cigarettes and batteries (3%).

ابو تفاحتين Abu Saifain Tea, ابو جمل زيت حبة البركة Abu Saifain Tea, ابو جمل زيت حبة البركة Abu Saifain Tea, ابو طير رز Abu Saifain Tea, ابو طير رز Abu Saifain Tea, أبو سيفين شاي Abu Rice, أبو خروف أرز Abu Bintain Rice, أبو خروف أرز Abu Rice, ابو نخلة زيت Abu Sayyara Indian Basmati Rice, أبو كاس أرز Abu Qubba Rice, أبو كاس أرز Abu Kas Rice, أبو كاس أرز Abu Nakhlah Oil, أبو كاس أرز Abu Nakhlatain Rice, أبو كاس أرز Abu Nakhlatain Rice, أبو كاس أرز Abu Nakhlatain Rice, أبو كاس أرز Abu Kura Rice, أبو نخلتين أرز Abu Nakhlatain Rice, أبو نخلتين أبو نخلتين أبو كلام Nakhlatain Rice, أبو نخلتين أبو كلام Nakhlatain Rice, أبو نخلتي بسمت Abu Nakhlatain Rice, أبو نخلتي Abu Na

¹ https://copilot.microsoft.com

² DeepSeek AI

individual using a kunya as a way to convey trust and familiarity, signals family ownership or legacy and creates a personal connection with consumers. For example: أبو سعد صابون > Abu Sa'd Soap refers to soap produced by or branded under someone known as Abu Sa'd. أبو عوف شوكولاته > Abu Awf Chocolate is a product line from the Abu Auf company, which is a well-known Egyptian brand. (iii) Grassroot or folk-brand names. These are folk labels for products which were coined by common people (consumers) based on a picture on the package, box or bottle (a tiger, spoon, wheel, a muscular man, a lion, a soldier and so on), or a symbolic association (e.g., strength, speed, luxury). These are not official trademarks, but have become functional identifiers in local markets. When someone says أبو فاس أبو فاس أبو فاس they mean Axe Brand Universal Oil - because the packaging features a picture of an axe. Consumers create these vernacular-brand names based on packaging imagery rather than the original foreign brand name of the product (Fucidin, Toblerone, Radian massage cream, Tiger balm, or Email Diamant) which is difficult to pronounce, unfamiliar, or simply not memorable.

Moreover, the Arabic brand names were rank-ordered alphabetically, then items with odd numbers were grouped together for tasks 1 & 2; those with even numbers were grouped together and used in task 3. All the Arabic brand names containing Abu in the sample were translated by MC and DS using 3 tasks as follows:

- 1) In the first task, set 1 with odd numbers, the prompt asked MC and DS to translate the phrases to English without mentioning the type of phrases: أبو الفتوح، أبو الهول، أبو باب، أبو بس، أبو بنت، ابو تفاحتين، ابو تفاحتين، أبو سلمان، أبو سنبلتين، أبو سهم، أبو سهمين، أبو مهمين، أبو حرارة، أبو حرارة، أبو حسين، أبو حصان، أبو حمامة، ابو حميد، ابو عجل، أبو عزيز، ابو مطرقة، أبو عضل، أبو علم، أبو علي، ابو عوف، أبو عوف، أبو عوف، أبو غربية، أبو غلمسيس، أبو فيصل، أبو قوس، ابو كرعة، ابو مبخره، أبو منارة، أبو نخلة، أبو نخلتين، أبو هريرة، أبو وردة، أبو ولد، أبو وليد، أبو غربية، أبو عزيز، ابو عزيم، أبو هلال
- In task 2, MC and DS were asked to translate set 1 to English by mentioning that the phrases are brand names only. Identifiers like rice, cheese, tea, etc were not given: المواقية ال
- 3) In the third task, MC and DS were asked to translate set 2 to English. The prompt mentioned that they are brand names and gave the product name associated with each: أبو بنتين ابو بكر زيت، برافين، أبو بس بوب كات، ابو بس دخان (سجائر)، أبو الهيل أرز، أبو القاسم زيوت، أبو الدهب أرز، أبو بطانية، أرز، أبو حصه كريم العضلات ابو حصان، ابو حسين رز، أبو جهينة أرز، ابو جمل زيت حبة البركة، أبو جبل شوكولاتة، ابو تفاحتين بطانية، أرز، ابو سيارة أرز أبو طبعة علك، ابو سنينه ارز، ابو سنبلتين ارز، ابو سلطان ارز، أبو رهدة زيت، أبو خروف أرز، أبو سيفين شاي، هندي بسمتي، ارز أبو عوف ابو عوف بسكويت، أبو على أرز، ابو عضلات كريم مسكن للالم، معجون اسنان ابو فحم ، معجون اسنان أبو عسكري ، أبو عوف بسكويت، أبو كورة أرز، أبو كاس أرز، ابو قبه ارز، ابو فاس مرهم، أبو غزالة،أرز بسمتي بنجابي، ابو غربية أرز، شوكولاته، أبو عضلات أبو ولد كندر شوكولاتة، أبو ولد بسكوت، ابو وردة كريم الشعر، ابو هلالين أرز، ابو نمر مرهم، أبو نخلتين أرز، نخلة زيت، أبو عضلات أبو ولد بسكوت. مرهم مشكن للالم،

All equivalents rendered by MC and DS were marked by the author. To be marked correct or, each Abu-brand name has to be treated as a Proper Noun and hence transliterated rather than literally translated, except for grassroot/folk coined brand names for which the equivalents given should be the original English brand names. To find out the strategies that MC and DS used in translating Arabic brand names with Abu in the sample, mistranslations were compiled and subjected to further analysis. The percentage of Arabic brand names translated correctly, those for which MC and DS gave literal translations, transliterated equivalents, an explanation, and variant lexemes, was calculated for MC and DS separately.

Inter-scorer reliability was calculated by having a colleague who taught translation mark a sample of responses given by MC and DS and by comparing both analyses. There was a 97% agreement between the two scorers. Disagreements were solved by discussion. Correct translation equivalents rendered by both MC and DS are reported quantitatively and qualitatively.

4. Results

4.1 Translation of Arabic Abu-Brand Names without Specifying Anything

Data analysis showed that both MC and DS failed to recognize the Abu-phrases as brand names and translated them word for word as phrases, not as brand names. Both gave identical English equivalents to 83% of the items in set 1 as in the following examples:

Father of the Mountain, أبو جبل Father of the Camel, أبو حصان Father of the Camel أبو حسين Father of the Camel أبو حصان Father of Hussein, أبو حصامة Father of the Horse, أبو حسين Father of the Camel أبو حسين Father of Hamid, أبو حسام Father of Rashid أبو حسين Father of Rashid أبو حسين Father of Hamid, أبو سهم Father of Rashid أبو سيف Father of the Flower أبو سهمين Father of Salman, أبو سيف Father of Two Arrows, أبو سهمين Father of the Sword أبو سيوف Father of Two Arrows, أبو سيف Father of the Wheel أبو عجلة Father of the Wheel أبو عجلة Father of the Wheel أبو علي Father of Muscles أبو علي Father of Ali, أبو علي Father of Muscles أبو علي Father of Ali, أبو علي Father of the Incense Burner أبو هريرة Father of the Incense Burner أبو المتوح أبو المتوح أبو المتوح أبو المتوح أبو المتوح أبو المتوح أبو علي Father of the Rose أبو علي Father of the Rose أبو علي Father of the Thorn أبو علي Father of the Flag أبو ميزان Father of the Thorn أبو الهول Father of the Flag أبو الهول The Sphinx.

In 14.5% of the items, DS gave double equivalents as the lexical item that follows Abu is polysemous, i.e., DS gave both semantic meanings, of which one is identical to that given by MC. Examples of the double equivalents given by DS are:

أبو الفتوح Father of Heat/Fever, أبو شوكة Father of a Thorn/Spine, أبو حرارة Father of a Thorn/Spine, أبو منارة Father of the Axe / Man from Fez, أبو ميزان Father of the Axe / Man from Fez, أبو منارة Father of the Scale/Balance, أبو الهول Father of Dread & Sphinx.

In 17%, MC and DS gave different equivalents of the lexical item following Abu as it is polysemous (أبو الهول، أبو بس، أبو الو كرعة). This means that MC gave one equivalent meaning, and DS gave another equivalent meaning (See Table 1).

Table 1: Variant Lexemes Given After Abu by MC & DS

Table 1. Validati Lexemes Given After Abu by Mc & DS	
MC	DS
• أبو بنت Father of a <i>Girl</i>	• أبو بنت Father of a <i>Daughter</i>
• أبو ولد Father of a <i>Boy</i>	• أبو ولد Father of a <i>Son</i>
• ابو کرعة Father of <i>Baldness</i>	• ابو کرعة Father of a Bowl/Goblet (a nickname)
• أبو بس Father of "Just" (possibly slang)	• أبو بس Father of a <i>Kiss</i> (a term of endearment)
• أبو سنبلتين Father of Two <i>Ears</i> of Grain	• أبو سنبلتين Father of Two <i>Earrings</i> (a nickname)
• أبو غربية Father of <i>Gharbiya</i> (a region)	 أبو غربية Father of the WaterSkin (a nickname)
• ابو شماغ Father of the <i>Headscarf</i>	• ابو شماغ Father of the <i>Shemagh</i> (a nickname for someone known for
	wearing or selling the traditional headdress)
• أبو غلمسيس Father of <i>Golgotha</i> (possibly Coptic	• أبو غلمسيس Father of <i>Glamsis</i> (This appears to be a proper name,
reference)	likely "Father of [son named] Glamsis")

In addition to giving the English semantic equivalent, DS gave an explanation/annotation such as saying that the equivalent is a nickname (29%) as in: أبو سهميا Father of Two Apples, أبو حمامة Father of a Dove, أبو سهمين Father of an Arrow, أبو سهمين Father of a Dove, أبو سهم أبو عجل Father of an Arrows أبو عجل Father of a Calf, أبو عجل Father of a Rose, أبو منارة Father of a Rose, أبو سنبلتين Father of a Rose, أبو منارة Father of a Thorn/Spine, أبو منارة Father of a Bowl/Goblet.

In 17%, DS explained that Abu+ Noun is a kunya: ابو حميد Father of Hamid, ابو راشد Father of Rashid, أبو علي Father of Rashid, أبو عزيز Father of Aziz, أبو علي Father of Aziz, أبو علي Father of 'Awf, أبو فيصل Father of 'Awf, أبو فيصل Father of Faisal, أبو علي Father of Faisal, أبو علي Father of Walid. In Arabic culture, fathers are called after the name of their eldest son (a respectful or affectionate nickname), so such brand names are similar to kunyas. In these examples, أبو حسين father denotes literal parenthood (e.g., أبو حسين). Interpreting Abu + Noun in the brand names in the sample by DS as traditional kunyas or nicknames would be misleading.

It is noteworthy to say that, 75% of the explanations given by DS are faulty and extraneous inferences of what the Abu + Nouns are, as in the following:

- آبو اصبعین Father of Two Fingers (a nickname, often for someone with a *hand injury*)
- ابو باب Father of a Door (a nickname, could refer to a doorman or someone associated with a significant door)
- أبو جبل Father of the Mountain (a nickname for a large or *imposing person*)
- أبو جمل Father of a Camel (a nickname for someone who *owns* or is associated with *camels*)
- أبو حسين Father of Hussein (a kunya, meaning he has a *son named Hussein*)
- أبو حصان Father of a Horse (a nickname for a horse *owner or breeder*)
- أبو سيوف Father of Swords (a nickname for a great warrior)

- ابو صقر Father of a Falcon (a nickname for a falconer or someone with falconlike qualities)
- ابو عجلة Father of a Wheel (a nickname, could be for a *mechanic or driver*)
- ابو مطرقة Father of a Hammer (a nickname for a blacksmith or a strong person)
- أبو عضل Father of Muscle (a nickname for a very *strong person*)
- أبو قوس Father of a Bow (a nickname for an *archer*)
- أبو هريرة Father of a Kitten (a famous historical nickname, meaning "the kitten guy")
- أبو حرارة Father of Heat/Fever (a nickname, could be for someone with a hot temper)
- أبو علم Father of a Flag/Banner (a nickname for a standard bearer or leader)
- أبو فاس Father of the Axe / Man from Fez (can be a nickname for a woodcutter or refer to someone from the city of Fez, Morocco)
- أبو ميزان Father of the Scale/Balance (a nickname for a fair or just person, like a judge)
- أَبو بس Father of a Kiss (a term of *endearment*)
- ابو شماغ Father of the Shemagh (a nickname for someone known for wearing or selling the traditional headdress)
- أبو غلمسيس Father of *Glamsis* (This appears to be a proper name, likely "Father of [son named] *Glamsis*")

The explanations/annotations rendered are faulty guesses because they are based on the use of kunyas and nicknames in a general, not a commercial context. DS made symbolic association with objects, traits, or professions (e.g., أبو سيف), physical characteristics or personal history (e.g., أبو غلمسيس أبو اصبعين). These explanations fall short because they assume literal or cultural meanings without taking the commercial context into consideration. They miss the marketing angle, where "Abu" is used to personify a product or service.

4.2 Translation of Arabic Abu-Brand Names by Specifying Context

In the second task, the author asked MC and DS to translate the same set of Arabic Abu-brand names by mentioning that they are brand names only. Interestingly, MC and DS gave the same translations as when the prompt did not specify anything. Both MC and DS translated them semantically, not as brand names used in a commercial context.

4.3 Translation of Arabic Abu-Brand Names by Specifying Context & Product Name

In the third task, the author asked MC and DS to translate set 2 (items with the even numbers) of Arabic Abu-brand names by specifying that the phrases are brand names and that each is followed by the product for which it stands. Again, MC gave literal word for word translation of all the brand names with Abu translated as father of and the following noun semantically as in أبو Father of AlQasim Oils, أبو بكر زيت برافين Abu Bakr Paraffin Oil, أبو بكر زيت برافين Father of AlQasim Oils القاسم زيوت Father of the Camel Black Seed Oil, أبو سيفين شاي Father of the Flower Oil, أبو زهرة زيت جبة البركة أبو عوف ,Father of the Mustache Oil أبو شنب زيت ,Father of the Bird Rice أبو عنب زيت ,Father of the Mustache Oil أبو شنب زيت ,Tea Father of the Gazelle Punjabi أبو غزالة أرز بسمتي بنجابي Father of Awf Biscuits, أبو غزالة أرز بسمتي بنجابي أبو Basmati Rice, أبو الهيل أرز Father of the Palm Tree Oil, أبو الدهب أرز Father of Gold Rice, أبو نخلة زيت Father of Juhayna Rice, أبو حصة أرز ,Father of Hussein Rice أبو حسين رز ,Father of Two Girls Rice أبو جهينة أرز أبو ,Father of the Lamb Rice أبو سنبلتين أرز ,Father of Sultan Rice أبو سلطان أرز ,Father of the Lamb Rice أبو خروف أرز ,Rice Father of the Slipper أبو شحاط أرز Father of the Car Indian Basmati Rice, أبو سيارة أرز هندي بسمتي Father of Small Ears Rice, سنينه أرز Father of Arish Rice, أبو قبة أرز Father of Gharbiya Rice أبو عريش أرز Father of Arish Rice أبو عريش أرز Father of Gharbiya Rice أبو هلالين أرز,Father of the Cup Rice أبو كاس أرز,Father of the Ball Rice أبو كاس أرز,Father of the Cup Rice أبو كاس أرز Father of the Axe Ointment أبو طبعة علك,Father of the Print Gum أبو فاس مرهم,Father of Two Crescents Rice أبو نمر مرهم,Father of Two Crescents Rice أبو حمامة معجون ,Teeth of Father Charcoal Toothpaste أبو فحم معجون أسنان,Just Father Bobcat أبو بس بوب كات,Teeth of Father Charcoal Toothpaste Father of Fork and Spoon أبو شوكة وملعقة سمن ,Just Father Cigarettes أبو بس دخان (سجائر) ,Father of the Dove Toothpaste أسنان Father of the Soldier Toothpaste, أبو وردة كريم الشعر Lion Father Ointment, أبو عسكري معجون أسنان Father of the Father of Muscles Pain Relief أبو عضلات كريم مسكن للألم ,Father of the Boy Kinder Chocolate أبو ولد كندر شوكولاتة ,Rose Hair Cream Father of the Boy Biscuit, أبو جبل شوكولاتة ,Pather of the Boy Biscuit أبو حصان ,Muscle Cream Father of the Horse كريم العضلات أبو حصان of the Mountain Chocolate, أبو ملعقة شوكولاتة Father of the Spoon Chocolate,

On the contrary, DS recognized the difference between translating descriptive phrases as in the first 2 tasks (section 4.1 & 4.2 above) and considering Abu-brand names with the product associated with them as Proper Nouns. Hence, DS rendered an English transliteration of all of the brand names in set 2. However, DS could not distinguish between manufacturer and owner-created brand names coined by the producers, manufacturers and business owners, and grassroot/folk-created brand names (nicknames coined by common people/consumers for foreign products). Taking this into consideration, 66% of the transliterated brand names are manufacturer-created brand names, constitute 30%, and owner-created brand names constitute 36%. The following are examples of manufacturer-created brand names:

,Abu Saifain Tea أبو سيفين شاي ,Abu Jamal Black Seed Oil ابو جمل زيت حبة البركة ,Abu Tuffahtain Blanket ابو تفاحتين بطانية أبو خروف أرز,Abu Bintain Rice أبو بنتين أرز ,Abu AlHil Rice أبو الهيل أرز ,Abu Nakhlah Oil ابو نخلة زيت ,Bou Tayr Rice ابو طير رز Abu Kharuf Rice, ابو سنبلتين ارز Abu Sayyara Indian Basmati Rice, أرز هندي بسمتي ابو سيارة Abu Qubba Rice, أبو كاس أرز Abu Qubba Rice, أبو كاس أرز Abu Kas Rice, أبو كورة أرز Abu Kas Rice, أبو كاس أرز Abu Kas Rice, أبو نخلتين أرز Abu Kura Rice, أبو نخلتين أرز Abu Rice (30%).

These "Abu" brand names are intentional and official - created by manufacturers or importers as registered or commercial identifiers. This mean that these names are proper nouns, should be transliterated, not translated and they function as brand identifiers, not descriptive phrases. Even if the name contains metaphorical or symbolic elements, the fact that it is a deliberate brand name means it should be preserved as it is in transliteration, because translation would distort the name and confuse consumers. Use of transliteration would avoid semantic misinterpretation. For example, translating أبو شنب زيت as "Father of Mustache Oil" would be misleading and even awkward. It aligns with global branding norms: Just like Pepsi or Nivea are not translated, Abu Awf or Abu Kas should remain intact as well. Abu-brand names in the examples herein are published by the manufacturer as an official English version of the brand (e.g., Abu Kas is marketed as Abu Kass). The transliterated name is even printed on the packaging.

Similarly, DS transliterated brand names coined by and named after the owner as in:

أبو القاسم زيوت, Abu Shhat Rice أبو جهينة أرز ال Abu Zahra Oil أبو زيرة (ين Abu Juhayna Rice أبو شحاط أرز الملا Abu AlQasim أبو نيت برافين Abu Bakr Paraffin Oil, أبو عوف Abu Shanab Oil أبو سعد صابون Abu Shanab Oil أبو غزالة أرز بسمتي Abu Awf Biscuit, أبو غزالة أرز بسمتي Abu Awf Biscuit, أبو غزالة أرز بسمتي Abu Awf Biscuit أبو علي أرز Abu Awf Chocolate, أبو عريش ارز Abu Ghazala Punjabi Basmati Rice, أبو عريش ارز Abu Araysh Rice, أبو علي أرز Abu Araysh Rice, أبو حصه أرز Abu Snaina Rice, ابو سلطان ارز Abu Sharbiya Rice, ابو حسين رز Abu Hissa Rice (36%).

In these examples, "Abu + Name" is used as a brand owner identifier. It is not metaphorical nor symbolic. It is referential, pointing to the actual founder, owner, or figurehead behind the brand or company. This usage is common in Arabic-speaking countries, where naming a business after a respected individual - especially using a kunya - is a way to convey trust and familiarity, signal family ownership or legacy and create a personal connection with consumers. For example: أبو سعد صابون > Abu Sa'd Soap refers to soap produced by or brand under someone known as Abu Sa'd; أبو عوف شوكولاته > Abu Awf Chocolate is a product line from the Abu Auf company in Egypt. So, in the case of such brand names, transliteration is essential because they represent real people or registered brand entities. They should be treated as Proper Nouns, and hence transliterated, not translated, to preserve their original form across languages. Translating أرز أبو الدهب âr Father of Gold Rice" would be incorrect and misleading. The correct rendering should be Abu Al-Dahab Rice, to maintain the brand identity.

Although DS could identify when brand names should be treated as Proper Nouns, it could not distinguish which types of Abubrand names to transliterate and which ones not to transliterate. DS overgeneralized the transliteration strategy to grassroot or folk-coined brand names (34%), where consumers create vernacular brand names based on packaging imagery, often because the original foreign name of the product is difficult to pronounce, unfamiliar, or simply not memorable. Grassroot brand names are a form of cultural shorthand, often passed by word of mouth, and reflect how language adapts to daily life. Here, DS failed to connect the Arabic grassroots or folk-coined brand names with the original foreign name of the product as in the following examples:

- ابو فاس مرهم Abu Fas Ointment instead of Axe brand.
- Abu Tabaa Chewing Gum instead of Bubble gum.
- ابو نمر مرهم Abu Nimr Ointment instead of Tiger balm.
- معجون اسنان ابو فحم Abu Fahm Toothpaste instead of Capitano Charcoal Toothpaste.
- ابو حمامة معجون اسنان Abu Hamama Toothpaste instead of Closeup.
- ابو شوكة وملعقة سمن Abu Shouka wa Mal'aga Ghee (Ghee with [a picture of] a fork and spoon) instead of Delico Ghee.
- أبو اسد مرهم Abu Assad Ointment instead of Fucidin.
- ابو وردة كريم الشعر Abu Warda Hair Cream instead of Kenrosa.
- Abu *Walid (walad) Kinder Chocolate instead of Kinder Chocolate.
- مسكن للالم Abu *Adhulat (Adhalat) for a Pain Relief Cream instead of Radian massage cream.
- كريم العضلات ابو حصان Abu Hisan Muscle Cream instead of Rofenac.
- أبو ولد بسكوت Abu *Walid (walad) Biscuit instead of Teashop.
- أبو جبل شوكولاتة Abu Jabal Chocolate instead of Toblerone.
- أبو ملعقة شوكولاته Abu Mal'aqa Chocolate (Chocolate with a spoon) instead of Dolcrem.

Linguistically, "Abu + Noun" becomes a folk label for a product because they are coined based on a picture on the packaging, (a tiger, spoon, wheel, a muscular man, a lion, a soldier ... etc), or a symbolic association (e.g., strength, speed, luxury). Grassroot/folk-brand names are not official trademarks, but have become functional identifiers in local markets. So, when someone says أبو فاس, they mean Axe Brand Universal Oil, because the packaging features a picture of an axe. Therefore, transliterating these names as Proper Nouns (Abu Fas) can be misleading in formal contexts like product catalogues, medical prescriptions, international trade and legal documentation. Instead, Al should identify the original brand name (e.g., Axe, Closeup, Toblerone, Double Spearmint ... etc.), use that as an equivalent and may note the local nickname if relevant for clarity. For example, اشترى مرهم أبو فاس should be "He bought Axe Brand Universal Oil (locally known as Abu Fas).

5. Discussion

5.1 Meaning of Abu in Arabic Brand Names

In Arabic, ابو فاس أبو عضلات – أبو نمر does not mean "father of" in the genealogical or metaphorical sense. It is functioning more like a marker of association or a visual branding device, closer to "with" or "characterized by", especially when tied to visual cues (images) or product packaging. For example, أبو قوس (Abu Qaws) is a condensed milk brand featuring a bow image and أبو عجلة (Abu Ajala) is a soap brand with a wheel image. In these cases, "Abu" functions as a label or identifier tied to the image on the packaging. It is a colloquial and a commercial usage that plays on the familiarity of the "Abu" structure to make the product memorable. The term becomes a visual-semantic bridge, not a literal or cultural kunya. It is a stylistic device that conveys familiarity, identity, and even humor. It has several functions:

- It gives the brand a character or persona. Example, *Abu Walad* (Father of the Boy) doesn't imply a literal father but evokes a friendly, family-oriented image, often used for chocolate, cheese and biscuit.
- It has folkloric and cultural resonance. "Abu" taps into the Arab tradition of nicknaming, where people are known by their association with something, like *Abu Fas* (Father of the Axe) for a pain balm. It creates a memorable identity that feels rooted in everyday language.
- Abu-brand names are characterized by catchiness and market appeal. أبو Abu is short, punchy, and easy to remember. It is often paired with a visual or emotional cue that sticks. It is flexible used for everything from rice (*Abu Hessa*) to batteries (*Abu Bas*).
- أبو Abu is about identity (giving the brand a face or character), familiarity (making it feel local), relatable, and trustworthy, symbolic (suggesting strength, quality, or a unique trait) and humor (sometimes it is just playful or ironic).
- Brand language often evolves into functional shorthand in everyday speech. for instance, the rice brand أبو سيوف (Abu Suyuf, or "Abu Swords"). The packaging features swords, and over time, "Abu Suyuf" has become a recognized product name. When a customer says, "Give me two أبو سيوف," the shopkeeper immediately understands it refers to two bags of that specific rice brand. No one is thinking about warriors—they're thinking about rice. This is a prime example of semiotic branding. The image of the swords anchors the brand visually and the name أبو سيوف anchors it verbally. Together, they form a mnemonic device that is easy to remember and use.
- In Arabic Abu-brand names, packaging holds linguistic authority. It is the final word. When a manufacturer prints a name like "Abu Kass" in English on the product, that becomes the official brand name, regardless of its meaning in Arabic. This principle is especially critical in contexts such as retail catalogs, international trade, e-commerce listings, and legal documentation. The packaging dictates the name to be used, not linguistic interpretation.
- There is a semantic shift of أبو فاس in colloquial branding. In expressions like أبو فاس > with an axe (based on the logo) > Axe Brand Universal Oil; أبو عضلات ; with muscles > Radian massage cream; أبو نمر > with a tiger > Tiger Balm أبو is not functioning as a metaphor for origin or causality. It is functioning as a visual shorthand, a folk label, or even a mnemonic device based on the image on the package. These grassroot or folk-coined brands have no Standard Arabic equivalents, are not grammatically derived from kinship metaphors, are entirely context-dependent, and are often tied to product recognition rather than linguistic logic. أبو ناس أبو فاس أبو المحافظة إلى المحافظة المحافظة إلى المحافظة المحافظ
- Many Abu-brand names are not informal nicknames or folk labels; they are official, registered brand identities. When names as أرز أبو كاس > Abu Kass Rice الزر أبو بنت > Abu Bint Rice appear in both Arabic and English on the packaging, they signal intentional transliteration by the manufacturer. These bilingual labels are standardized and serve to ensure brand recognition across diverse markets, particularly where consumers speak multiple languages. Just like Nestlé or Heinz, these names are treated as proper nouns. Translating them (e.g., "Father of the Cup" for Abu Kass) is incorrect and misleading. Instead, they must be transliterated exactly as shown on the packaging. Al systems and translators should always defer to the packaging as the authoritative source.

5.2 Translating Arabic Abu-Brand Names With and Without Specifying The Phrase Type and Product

Results of the current study showed that both MC and DS failed to recognize the Arabic Abu-brand names in set 1 and translated them word for word. Even when the prompt mentioned that the phrases are brand names, MC and DS also failed to recognize them as brand names and gave the same word-for-word translation as in the first task, in which the type of phrases was not mentioned in the prompt at all. Even when the prompts mentioned that the phrases were brand names and added the

product with which each brand name is associated, MC still failed to give correct English equivalents and translated all the brand and product names word-for-word. Unlike MC, DS considered the phrases in the third task as Proper Nouns and transliterated them all in English regardless. Only 66% of the brand names were correctly transliterated as they were the manufacturer and owner-coined brand names. The other 34% which were grassroot or folk-coined brands and should not have been transliterated. Rather, the original foreign brand name should have been provided.

It seems that when there is no context or when the context given is not sufficient, AI performs a linguistic analysis, but when the brand context is defined, this helps DS (but not MC) in cultural and commercial recognition. It is like the difference between translating "Apple" as a fruit vs. recognizing it as a tech company. Same word but totally different implications.

When MC was asked to translate the Abu-brand names without context, it relied primarily on linguistic and semantic analysis: It broke down the grammar and root words, to give the most accurate literal meaning. MC pulls from a general corpus of language knowledge and common usage. But when the author told MC and DS that the phrases are brand names, DS tapped into a different layer of understanding - one that includes commercial databases, product catalogs, marketing language, user-generated content (like forums, reviews, and social media), and cultural branding patterns which MC failed to identify.

5.3 Why AI failed in Recognizing Abu-brand Names

Most AI models are trained on formal Arabic corpora, linguistic glossaries and parallel translation datasets. But they often lack brand-specific corpora tied to packaging, colloquial naming conventions based on logos and multimodal reasoning (image + text), corpus exposure to packaging language and cultural annotation that links colloquial usage to commercial products. Without these, AI may default to literal translation or miss the associative logic and visual entirely. Colloquial brand names in Arabic use أبو as a visual-semantic bridge, not a metaphor, Standard Arabic cannot capture this usage, and AI must be guided by contextual cues. Product packaging plays a central role in meaning-making, especially in low-literacy or oral contexts. MC may detect that أبو فاس is metaphorical, and that it may refers to a remedy, but unless MC is trained on brand associations or folk usage patterns, it might not immediately map it to Axe Brand Universal Oil without additional cues. In addition, there are corpus gaps in folk usage. Common Abu-brand names used in colloquial Arabic are often underrepresented in parallel corpora, absent from formal marketing glossaries, and are highly regional or brand-specific. So MC may not always retrieve the exact English equivalent unless it is widely documented or explicitly linked in training data.

5.4 Why MC and DS Gave Many Identical Faulty English Equivalents

Finding of the current study revealed that MC and DS gave many identical English equivalents to the Arabic Abu-brand names especially when asked to translate the first set without specifying the type of phrases and even when the prompt mentioned that the phrases were brand names for several reasons: First, both MC and DS are working from a shared linguistic and cultural foundation. Both conduct a literal translation of common structures as in the phrase "Abu + noun" follows a predictable pattern in Arabic, translating it as "Father of + noun" is the most direct and widely accepted default method. Since both systems are trained on large corpora of Arabic-English texts, MC and DS are likely to converge on the same literal output - especially for straightforward phrases like: أبو عضلات > Father of Sword & أبو عضلات > Father of Muscles. Second, MC and DS use similar training data sources. It seems that MC and DS have been exposed to parallel Arabic-English datasets, including Wikipedia, product catalogs and user-generated content. So when the input is clean and the cultural context is strong, convergence is expected.

5.5 Comparison of AI Translation of Abu-Brand Names and Other Metaphorical Expressions

Results of the current study indicated that MC could not give correct equivalents to any of the 100 Arabic Abu-brand names in the sample (0%). This is the first type of structure with which MC has the utmost difficulty. MC and DS performance in translating folk medical terms containing أبو Om & أبو Abu, expressions of impossibility, Gaza-Israel war terminology, grammatical terms used metaphorically, and zero expressions and medical terms was much better than connecting brand names with their corresponding equivalents. This is because of how AI models are trained, what they prioritize, and where they falter. In translating folk medical terms involving أبو ما أبو Omega Israel war terminology, grammatical terms used metaphorically, and zero expressions of impossibility, Gaza-Israel war terminology, grammatical terms used metaphorically, and connecting brand names with their corresponding equivalents. This is because of how AI models are trained, what they prioritize, and where they falter. In translating folk medical terms involving أبو Omega Israel war terminology, grammatical terms with their corresponding equivalents. This is because of impossibility, Gaza-Israel war terminology, grammatical terms used metaphorically and names in the folk medical terms and brand names in the folk medical term study and in the current study (AI-Jarf, 2025b; AI-Jarf, 2025c; AI-Jarf, 2025c; AI-Jarf, 2025e; AI-Jarf, 2025f); AI-Jarf, 2024a; AI-Jarf, 2024b; AI-Jarf, 2021a; AI-Jarf, 2016a).

In addition, even though DS gave faulty English equivalents to Arabic Abu-brand names on tasks 1 & 2 as it rendered word-forword translation, it showed accuracy and deep understanding of lexical meaning when it yielded double equivalents to each polysemous lexeme following Abu, despite the limited context (Abu + Noun). Here DS outperformed Google Translate which made mistakes in recognizing polysemous words in full text educational articles and could not select the equivalent that best suited the educational context (Al-Jarf, 2025a).

In translating أبو Abu-phrases by Al, accuracy is not just about language – it is about domain, context, and corpus design. Al performs better when terms are stable, well-documented, and semantically anchored. The core dilemma in Al translation is that recognizing Abu-phrases is not the same as resolving them. Al often identifies the metaphorical structure - like أبو فاس but it does not always match it directly with their common English equivalents unless prompted with enough context or specificity. This reflects how Al models are trained to preserve semantic transparency before committing to equivalence.

As mentioned earlier, Abu-brand names used in colloquial Arabic are often underrepresented in parallel corpora, absent from formal marketing glossaries and are highly regional or brand-specific in which case MC may not always retrieve the exact English equivalent unless it is widely documented or explicitly linked in the training data to brand associations or folk usage patterns, it might not immediately map it to Axe Brand Universal Oil without additional cues.

5.6 Comparison of AI and Human Translation of Om and Abu Expressions

Results of the current study demonstrated that MC and DS failed to render correct English equivalents to Arabic Abu-brand names when the brand names were *not* marked as brand name, when they were marked as brand names and even when they were marked as brand names and associated with the product which they represent. MC failed on all three tasks as it rendered literal word-for-word translations, DS successfully recognized the sample as brand names, considered them Proper Nouns and transliterated them according. Compared to the performance of MC and DS, human translators in (Al-Jarf, 2017) performed somewhat better than MC in all tasks, and better than DS in tasks 1 and 2 but DS performed better than translation students in recognizing Arabic Abu-brand names and treating them as Proper Nouns. In prior studies by the author, student translators could translate less than 20% of the place in expressions on the test correctly. They left many items blank, and literal translation was the most common strategy by students, similar to MC and DS in the current study. Arabic and English expressions that are similar in English and Arabic were easy for students to translate. But those where there is no on-to-one correspondence between Arabic expressions and their English equivalents were difficult to translate and many were left blank. This means that familiarity, in the case of students and MC and DS plays a significant role in rendering correct equivalents.

6. Recommendations

Language is layered. So, when it comes to brand names, especially in advertising and marketing, surface meanings can be deceptive and may be mistranslated by Al. A phrase that sounds folkloric might be a clever piece of marketing. Brand names with Abu mimic traditional kunyas to evoke personality or identity. But they subvert the meaning by tying it to visual branding, not familial or symbolic association. Abu+noun is a form of semantic borrowing, where the cultural weight of "Abu" is repurposed for marketing. This is a type of cultural resonance where Arabic speakers are used to "Abu" names, so Abu-brand names feel familiar. They represent visual anchoring where the image reinforces the name, making it easier to remember and a kind of playful ambiguity. Therefore, providing an accurate English equivalent to Arabic Abu-brand names by Al as those in the current study, depends on the following: (i) Al's training data. If it includes regional e-commerce, social media, or informal speech, it might recognize "Abu Fas" as Axe Oil. (ii) Context awareness. Without explicit cues in the prompts, many Als (including Copilot & DeepSeek) may default to literal translation, especially if the brand name looks like a kunya or nickname. (iii) Named entity recognition. Some systems, like DeepSeek, are optimized to treat these as Proper Nouns, but may not link them to the original foreign brand, unless they are trained on that mapping. So, unless AI has been trained on localized brand aliasing, it may is Toblerone chocolate. In the case of grassroot شوكولاتة أبو جبل refers to Tiger Balm or that أبو نمر brand names, AI should use the original brand name when known, avoid transliterating folk names unless the context demands it (e.g., quoting a customer). It should annotate where necessary to enhance understanding. This is especially important in brand names that use medical contexts (e.g., ointments, creams), or commercial translation and cross-border marketing.

In translating Arabic Abu-brand names, translation students, manufacturers, business owners should distinguish manufacturer-created brands that should be considered Proper Nouns and hence transliterated and folk-coined brand names for which an original foreign brand name exist, in which case this kind of brand names should neither be transliterated, nor translated but should be substituted by the original brand name that exists in the foreign language.

The corpus that Al uses to translate or translate phrases in L1 and their equivalents in L2 should be expanded to include Arabic Abu-brand names and their English equivalents and vice versa. Brand names should be included in the Al training data so that Al can distinguish phrases used in a general context and those used in a commercial or advertising context.

The intersection of visual branding, colloquial naming, and semantic drift in Arabic Abu-brand names presents unique challenges for Al. When <code>j</code> is used as a branding cue - especially alongside visual logos - Al must rely on multimodal reasoning (image + text), corpus exposure to packaging language, and cultural annotation linking colloquial usage to commercial products. Without these, Al may default to literal translation and miss the associative logic entirely. Standard Arabic cannot fully capture this branding usage. Contextual cues from packaging are essential, particularly in low-literacy or oral markets where visual recognition drives meaning.

Finally, when translation students, manufacturers, and business owners use AI to translate Abu-brand names, they should mention in the prompts the kind of phrases AI is going to translate/transliterate together with the product name associated with each brand name. They can also ask AI to annotate the equivalents given to make sure they are accurate.

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