**Adversarial Machine Translation Inputs:**

I tried using different sought of sentences. For instance, I used some simple sentences that were predicted perfectly so I skipped printing it here in the table, used some of the compound and complex sentences, used some proverbs, some to test the tense, some from history like the ancient words in the sentence, some for vocab check, some are tongue twisters.

| Original Telugu Language Sentence (Input) | Translation (by Google Translator) (Output) | Correct Translation by Human |
|---|---|---|
| 1) వున్న కురిసిన పెళ్ళాలా నేను బడికి వెళ్ళను | I do not go to school | Whenever it rains, I won't go to school |
| 2) చూడు ఒక వైపు చూడు రెండో వైపు చూడాలనుకోకు తట్టుకోలేవ్ మాడిపోతావ్ | Look at one side. Look at the other side | Try seeking only good from the people, if not you will be in trouble |
| 3) వాడు పోతే వీడు, వీడు పోతే నేను | If he goes home, I go home | If he goes another one, and if anyone goes it is me |
| 4) వంద మందిని ఒక్కేసారి రమ్మను | Do not seduce a hundred people at once | Try to send hundred people at one go |
| 5) అమ్మ నేను తీసుకోని వెళ్తున్నాను మర్చి పో ఇంకా దాని గురించి | Mom I'm not going to forget about it yet | Mother I am taking it, forget about it from now |
| 6) గాడి లోనే కందిపప్పు గది కింద పందికొక్కు | Piglet under the soybean room in the groove | Red gram in a basket and a bandicoot under it. |
| 7) నను చినపుడు నుండి మా అమ్మ కి సహాయం చస్తున్నాను | I have been helping our mother since I was a child (Tense Check) | I have been helping my mother from my childhood. |
| 8) ఒకరి కష్టం తెలియాలి అంటే వాళ్ళు చస పనిని చేసి చూడు | Knowing one's difficulty means they do and see | If you want to know one's difficulty, try doing their job. |

| 9) కలం అప్పుడు ఒకలా ఉందాహు నే కలం కోసం ఎదురు చూడాలి | The pen then has to wait for the pen to be the same | One's difficult time won't last long, need to have patience to get over it. |
|---|---|---|
| 10)ప్రతి మనిషిలో మంచి చెడు రెండూ ఉంటాయి | Every man has both good and bad | Every person has both good and bad side. |

**Analysis of each sentence:**

In Sentence 1, the google translator was able to predict the second half of the sentence (నేను బడికి వెళ్ళను) and wasn't able to for the first half (వున్న కురిసిన వెళ్లాలా). In the context of Telugu grammar, the sentence falls under complex category (Subordinate conjunction comes at the end of the clause). So there the pronoun (నేను) in the middle of the sentence wasn't able to link with the first half, that might be one of the reasons while translating and it is unable to take or relate the reference of the pronoun to the first few words of the sentence.

The Sentence 2 says "Try seeking only good from the people, if not you will be in trouble", but it predicted "Look at one side. Look at the other side" the translator was able to grab only few Telugu words from the sentence like చూడు, రెండో, వైపు. But wasn't able to build the sentence across the actual subject, which ultimately ended up with a no meaning.

In Sentence 3, This is more a metaphoric sentence in the context of language Telugu, పోతే is more of like "Go" but the translator is taking it as "Go Home" this might be the vocabulary while translating it from one language to another and the nature of the sentence and wasn't able to differentiate the two different pronouns వీడు and వాడు.

In Sentence 4, In any language we will be having a different meaning to the same word based on the sentence and the situation, this might be a problem here. For the word రమ్మను has different meanings, it tried using one of the meaning but wasn't able to give the meaning in context to the subject of the sentence.

For Sentence 5, It predicted incorrectly, like for synonyms, it predicted antonyms. తీసుకోని పెట్టున్నాను is I am taking it but translator says I'm not going and skipped taking in between going and not. As per telugu grammar the subject was in middle of the sentence and the noun and verb was side by side but coming to the English grammar its different, the main reason for this is grammar equivalence and the synonyms, antonyms.

In Sentence 6, the whole sentence doesn't make sense, like in the above sentence the synonyms were wrong, wasn't able to categories the verbs and the nouns, incorrect metaphors, this sentence had more of an ancient words and it's a proverb in language telugu.

In sentence 7 I was trying to check tense, మా (my) is a possessive weak pronoun/ possessive adjective in English, but the translator predicted it as our might be due to the way of usage in terms of Telugu grammar. But in the sentence, a person was trying to say to a third person about his mother, so more likely the pronoun should be "my" instead of 'our'. Rest of the sentence has almost the same meaning even though it used different words.

In Sentence 8, even though it predicted most of the words correctly, it wasn't able to print the main noun that was playing the main role in the terms of meaning to the whole sentence. It maybe because of the type of noun and less bias, some tokens aren't up to the mark.

In Sentence 9, The word కలం has many meanings, in context to the sentence it should print "Time" but it printed "Pen", Like the same mistakes in some of the sentences above, it many be because the usage of synonyms are less since the vocabulary is vast in Telugu, not just in telugu but in all languages. Even though it sensed some similar meaning its lacking textual Equivalence.

In Sentence 10, The main reason here is the Gender and the ways of using the plurals in the field of indicating the genders to specific and a group of people of same gender. మనిషి is more like a person, but it predicts man and wasn't able to find the proper adjective which almost ended the sentence meaning less like wasn't able to describe what the sentence end goal is.

The more errors occur in Language TELUGU is because due to less amount of data available (Because the amount of people who speak this is way less). I would try (**Transfer Learning**) collecting more data from different languages that are being spoken in the South India (Why would I collect data from different languages for telugu? I would do it because every language in south India - Tamil, kannada, Malayalam share the similar root words as telugu). So, if I collect the more data from all these languages and try using the root words. This would be a great move in improving the errors that are being occurred to telugu while translating and training the model more with the perfectly structured grammar based data.