

Submission Guide: SMT with BLEU Evaluation

Group 5 | NLP Assignment 2

1. Team Members

Name	Student ID	Role	Contribution
Karan Sharma	2024AB05145	Documentation, Testing & Visualization	100%
Neerumalla Kavitha	2024AA05879	Data Preprocessing & N-gram Analysis	100%
Selva Pandian S	2023AC05005	Backend API & Model Integration	100%
Shikhar Nigam	2024AA05691	Frontend Development & UI/UX	100%
Suraj Anand	2024AA05731	System Architecture & BLEU Implementation	100%

2. Project Documents

Here are the files you need to check:

Implementation Report (Task A)

File Path: report.pdf This report explains how we built the project. It covers:

- How we calculated the BLEU score.
- The problems we faced and how we solved them.
- Screenshots of the application.

Quality Improvement Strategy (Task B)

File Path: task_b_quality_improvement.pdf (In the root folder) This document explains our ideas on how to improve duplicate translation quality.

Literature Survey (Part 2)

File Path: part2_literature_survey.pdf (In the root folder) This is a survey of different ways to evaluate Machine Translation systems.

Application Screenshots

Folder Path: results/output These are screenshots showing the application results.

Live Demo

Link: <https://nlpsmt.vercel.app/> You can check out the live version of the project here.

3. Code Files

- **app.py** (app.py) Main Python file of the project. It runs the web application and implements the BLEU score evaluation logic.
- **automated_evaluation.py** (automated_evaluation.py) Script used for automated testing of the system with multiple languages to evaluate translation performance.
- **index.html** (templates/index.html) Front-end HTML template for the website. It also contains the JavaScript required for file uploads.

4. How to Run

1. Install the requirements: pip install -r requirements.txt
2. Run the app: python app.py
3. Open <http://localhost:5000> in your browser.