Project Progress Report: 09/22/2025
To: Basu Sir
From: Melina Singh
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Subject: Research Update – Sentiment Analysis with Gemini API

Today's work focused on background research to support the ongoing sentiment analysis integration using the Gemini 1.5 Flash model. The goal was to explore ways to improve accuracy and make the system more reliable for processing Nepali-language content.

Key areas of research included:

- **Prompt Design Improvements:**
  Looked into methods for making prompts more effective when working with Nepali. This includes keeping the instructions simple, using clear sentiment labels, and reducing any possible confusion that could affect the model's output.

- **Handling Neutral or Indirect Language:**
  News articles often use formal or neutral language, even when reporting negative events. I explored how models interpret such cases and how to adjust the prompts to better capture the intended sentiment.

- **Model Comparison:**
  Reviewed some comparisons between Gemini 1.5 Flash and other LLMs like GPT-4 for sentiment tasks. While Gemini is faster, especially for real-time tasks, I noted that deeper understanding might require more advanced prompt strategies.

- **Cultural and Language Bias:**
  Studied how large models may interpret sentiment differently depending on cultural context. This is especially important for Nepali content, where expressions or tone might be misunderstood by general-purpose models.

This research will help guide the next stages of development, especially in refining prompts, improving classification accuracy, and planning evaluation methods.