# **🧪 Lab 4: Summarization and Text Transformation**

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### **🎯 Objective:**

To explore ChatGPT’s ability to perform **text summarization**, **rewriting**, and **tone transformation** (formal ↔ informal).

### **📋 Activities Conducted:**

1. **Summarized** a news article and a research abstract.
2. **Rewrote emails** in both formal and informal tones.
3. Compared **original vs output** for clarity, tone, and meaning retention.

## **📄 Summary and Text Transformation Report**

### **✅ 1. News Article Summarization**

**Original:** *"India's lunar mission Chandrayaan-3 successfully landed on the moon's south pole, making India the first country to achieve this feat. The mission aims to explore the lunar surface for water ice and conduct scientific experiments."*

**ChatGPT Summary:** India's Chandrayaan-3 became the first mission to land on the moon's south pole, aiming to explore water ice and perform experiments.

**✅ Accuracy:** High  
 **✅ Relevance:** All key points retained.

### **✅ 2. Research Abstract Summarization**

**Original Abstract:** *"This paper investigates the use of AI models in predicting disease outbreaks based on historical and real-time health data. It applies machine learning techniques to achieve over 90% accuracy in early detection of viral infections."*

**ChatGPT Summary:** The study uses AI to predict disease outbreaks with 90% accuracy using historical and live health data.

**✅ Accuracy:** High  
 **✅ Clarity:** Concise and focused.

### **✅ 3. Email Tone Transformation**

#### **✉️ Original Email (Informal):**

*"Hey, just wanted to remind you about the team meeting tomorrow. Let me know if you're coming!"*

#### **🔁 Rewritten (Formal):**

*"Dear Team,  
 This is a gentle reminder about the team meeting scheduled for tomorrow. Kindly confirm your attendance.  
 Best regards,"*

#### **✉️ Original Email (Formal):**

*"Dear Sir, I am writing to request a leave of absence for two days due to personal reasons."*

#### **🔁 Rewritten (Informal):**

*"Hi! I need to take a couple of days off for personal stuff. Hope that’s okay!"*

## **📊 Comparison Summary**

| **Task** | **Original Style** | **Transformed Style** | **Quality** |
| --- | --- | --- | --- |
| News Summary | Informative | Concise Summary | ✅ High |
| Abstract Summary | Technical | Simplified Summary | ✅ High |
| Email 1 (Informal→Formal) | Casual | Professional | ✅ Accurate |
| Email 2 (Formal→Informal) | Professional | Friendly/Casual | ✅ Natural |