Individual Contribution Report

**Project Title**: Amazon Sentiment Analysis – NLP Pipeline  
**Student Name**: Cristobal Gonzalez Diaz  
**Student ID**: A  
**Team Members**:

* Cristobal Gonzalez Diaz – A00083919
* [Teammate’s Full Name] – [Insert ID]

Contribution Summary

My key responsibilities in this project included:

1. **Development Environment Setup**
   * Created a reproducible devcontainer environment to ensure consistency across team systems.
   * Built a Conda environment (isy503-tf) with dependencies including TensorFlow, NLTK, Flask, and scikit-learn.
2. **Jupyter Notebook Refinement**
   * Enhanced data preprocessing functions to improve text cleaning and consistency.
   * Applied lemmatisation, stopword filtering, and contraction expansion to improve data quality.
   * Structured the notebook to enable clean dataset ingestion, tokenisation, padding, and model training.
3. **Web Application Development**
   * Created a user-friendly Flask web interface for sentiment prediction.
   * Integrated session-based history tracking and a clear UI with styling.
   * Implemented prediction logic and connected it to the trained LSTM model.
4. **Repository & Documentation**
   * Created and managed the Git repository structure.
   * Organised the codebase into logical folders (/templates, /model, /data) to enable deployment and testing.
   * Developed presentation slides explaining the interface and environment setup (3 submitted slides).

**🔁 Collaborative Work**

While I focused on environment setup and interface design, my teammate contributed to model architecture, training optimisation, and evaluation metrics. We jointly reviewed and validated the overall system, ensuring all deliverables met the marking rubric.