

Software Requirements Specification (SRS)

Automated Essay Evaluation and Feedback System

1. Introduction

The Automated Essay Evaluation and Feedback System is a smart software application designed to help students improve their writing skills. It automatically checks essays and provides scores along with clear feedback using artificial intelligence and natural language processing technologies.

This document explains what the system should do, how it will behave, and the expectations for performance and usability.

1.1 Purpose

The purpose of this SRS document is to clearly define the requirements of the system for developers, reviewers, and academic supervisors.

1.2 Scope

The system allows users to submit essays, receive evaluations based on multiple quality factors, get improvement suggestions, and track progress across multiple submissions.

2. Overall Description

The system is a standalone web application using multiple AI modules to analyze essays such as grammar, structure, and clarity.

2.1 User Classes

Students, teachers, and researchers are the primary users of the system.

2.2 Operating Environment

The system runs on web browsers with Python backend and Streamlit frontend.

2.3 Constraints and Assumptions

English language support only, internet access required, and moderate essay length.

3. Functional Requirements

- Users can enter essay text.
- System preprocesses text.
- Grammar analysis.
- Coherence analysis.
- Argument evaluation.
- Rubric scoring.
- Feedback generation.
- Improvement suggestions.
- Submission history.
- Progress comparison.

4. External Interface Requirements

Web-based interface with NLP model integrations.

5. Non-Functional Requirements

- Fast response time
- User-friendly interface
- Secure data handling
- Reliable scoring
- Scalable architecture

6. Innovative Features

- Adaptive rubric learning
- Explainable scoring
- Argument mapping
- Personalized improvement
- Bias monitoring
- Peer comparison

7. Future Enhancements

Multilingual support, plagiarism detection, dashboards, collaboration tools.

8. Conclusion

The system modernizes essay evaluation using AI to provide faster and clearer feedback.