**Software Requirements**

**Specification**

**For**

**AI Code Reviewer**

**Version 1.0 approved**

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**1. Introduction**

**1.1 Purpose**

This Software Requirements Specification (SRS) document describes the functional and non-functional requirements for the AI-Powered Code Reviewer system, version 1.0. This document covers the Minimum Viable Product (MVP) phase of the system, which will integrate with GitHub to analyze JavaScript/TypeScript code changes against company standards using AI to detect issues that traditional static analyzers might miss.

**1.2 Document Convention**

The following conventions have been used in this document:

* Requirements are organized by functional areas and are numbered hierarchically.
* "Must" indicates a mandatory requirement.
* "Should" indicates a desirable requirement.
* "May" indicates an optional requirement.
* TBD (To Be Determined) is used for details that will be defined in future versions of this document.

**1.3 Intended Audience and Reading Suggestions**

This document is intended for:

* **Development Team:** To understand what needs to be built
* **QA Team:** To develop test plans and test cases
* **Project Manager:** To plan the implementation and allocate resources
* **Stakeholder:** To ensure the system meets business requirements

**1.4 Product Scope**

The AI-Powered Code Reviewer system is designed to serve as a preliminary checkpoint before developers submit code for formal peer review. It aims to:

* Automate initial code quality checks to ease senior developers' workload.
* Help junior developers receive immediate feedback on their code changes.
* Improve overall code quality and consistency.
* Reduce the number of review iterations required before code acceptance.
* Enforce company coding standards consistently.

The system will integrate with GitHub to analyze pull requests, focusing initially on JavaScript/Type Script code analysis, and will provide feedback directly within GitHub's interface.

**1.5 Reference**

* GitHub API Documentation: <https://docs.github.com/en/rest>
* ESLint Documentation: <https://eslint.org/docs/latest/>
* Hugging Face Models Documentation: <https://huggingface.co/docs/transformers/index>
* JavaScript/TypeScript Code Style Guide: [\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*]
* Node.js Documentation: <https://nodejs.org/en/docs/>