📄 AI CODE REVIEWER – INTERNSHIP PROJECT REPORT

Elevate Labs – Python Internship  
Intern Name: Rohitha Andey  
GitHub Repository: <https://github.com/Rohitha777/ai-code-reviewer>  
Internship Duration: [Insert Duration, e.g., June 2025 – July 2025]  
Project Completion Date: [Insert Date]

1. PROJECT TITLE  
   AI Code Reviewer – A Streamlit-based Code Quality Analyzer and Report Generator
2. OBJECTIVE  
   To develop a web-based AI Code Reviewer tool that assists developers in identifying coding issues, analyzing code quality, and generating professional code reports. The tool utilizes Python libraries such as flake8, black, and radon to provide feedback and guidance on best coding practices.
3. PROJECT OVERVIEW  
   This project is developed as part of the Elevate Labs Python Internship. It is a creative and user-friendly web application that allows users to:

* Paste or upload Python code
* Analyze the code for syntax and style issues
* Measure code complexity
* Auto-format code (optional)
* Generate a comprehensive PDF report of the code quality
* Send the report to a user-specified email address

1. TOOLS & TECHNOLOGIES USED

* Python
* Streamlit (Web UI)
* flake8 (Linting)
* black (Code formatting)
* radon (Code complexity analysis)
* smtplib & email.message (Email functionality)
* ReportLab (PDF generation)
* GitHub (Version control & deployment)

1. PROJECT MODULES

* app.py – Main application logic for Streamlit frontend and function integration
* utils/
  + analysis.py – Performs flake8, black, and radon analysis
  + report.py – Generates PDF report from analysis results
  + send\_email.py – Handles email sending functionality
* requirements.txt – Lists all dependencies
* your\_logo.jpg – Branding/logo for PDF and UI

1. FEATURES IMPLEMENTED

* Streamlit UI with navigation and modern styling
* Code input field with editor
* Flake8 for PEP8 lint checks
* Radon for code complexity measurement
* Black auto-formatting integration
* PDF report generation with summaries, error listings, and complexity scores
* Email report delivery to the specified user
* GitHub integration for open-source publishing

1. PROJECT HIGHLIGHTS

* Real-time feedback on pasted code
* Clean, user-friendly interface
* Custom branding and professional design
* Email automation of analysis reports
* Enhanced portability and ease of use
* Modular architecture for scalability

1. CHALLENGES FACED

* Activating virtual environments and managing dependencies on Windows
* Handling Python library conflicts
* Ensuring compatibility between various analysis tools
* Managing file paths and PDF errors
* Configuring SMTP authentication securely

1. OUTCOMES

* A fully working AI Code Reviewer app deployable via Streamlit
* Hosted project repository on GitHub
* Increased proficiency in Python libraries and project structure
* Practical knowledge of real-world software development workflows

1. FUTURE SCOPE

* Add support for multiple programming languages
* Use AI/LLMs for natural language code reviews
* Add login and user dashboards
* Deploy as a hosted web application (e.g., Streamlit Cloud or Heroku)

1. CONCLUSION  
   The AI Code Reviewer project has been a highly rewarding experience. It has enhanced my technical skills, understanding of software tools, and experience with deployment and collaboration. I thank Elevate Labs for the opportunity to work on this project as part of their Python Internship.
2. SCREENSHOTS:

