LaTeX Test File for CodeGuardian PoC

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1 Introduction

This is a test file for the CodeGuardian Proof of Concept demonstrtion. It contanes various LaTeX functionalites and intentional speling errors for testing purpouses.

2 Mathematical Formulas

The quadratic formula is given by:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Some matrices and advanced calulations:

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{pmatrix}$$

3 Code Snippets

```
def helo_world():
    print("This is a test fucntion")
    return True
```

4   Text Formatting

This paragraph demonstrates **bold text**, *italic text*, and <u>underlined text</u>. We can also use `monospaced font` for code refferences.

4.1   Subsection Example

The CodeGuardian PoC aims to identyfy and corect various documention erors and anomalies in LaTeX documenets.

5   Conclusion

This test file sucessfully demonstrates the capabilitys of the testing framework. Futher developement will include aditional features and improvments.