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| Handwritten-Digit-Recognition-using-Deep-Learning  Branch : main  Version 1.0  Code analysis |

|  |
| --- |
| **By: Administrator**  **2025-06-19**  **Analyzed the : 2025-06-19** |
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# Introduction

This document contains results of the code analysis of Handwritten-Digit-Recognition-using-Deep-Learning.

# Configuration

* Quality Profiles
  + Names: Sonar way [Python];
  + Files: 8dd42e22-6dfb-4642-b0cc-2fca2ac2e0d0.json;
* Quality Gate
  + Name: Sonar way
  + File: Sonar way.xml

# Synthesis

## Analysis Status

|  |  |  |  |
| --- | --- | --- | --- |
| Reliability | Security | Security Review | Maintainability |
| A.png | **A.png** | **A.png** | **A.png** |

## Quality gate status

|  |  |
| --- | --- |
| Quality Gate Status | **OK.png** |



## Metrics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Coverage | Duplication | Comment  density | Median number of lines of code per file | Adherence to coding standard |
| 0.0 % | **59.6 %** | **9.7 %** | **57.0** | **99.8 %** |

## Tests

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Total | Success Rate | Skipped | Errors | Failures |
| 0 | **0 %** | **0** | **0** | **0** |

## Detailed technical debt

|  |  |  |  |
| --- | --- | --- | --- |
| Reliability | Security | Maintainability | Total |
| - | - | 0d 1h 12min | 0d 1h 12min |

## Metrics Range

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cyclomatic  Complexity | Cognitive  Complexity | Lines of code per file | Comment  density (%) | Coverage | Duplication (%) |
| Min | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Max | 13.0 | 11.0 | 134.0 | 32.9 | 0.0 | 98.7 |

## Volume

|  |  |
| --- | --- |
| Language | Number |
| Python | 541 |
| Total | 541 |

# Issues

## Charts

## Issues count by severity and type

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Type / Severity | INFO | MINOR | MAJOR | CRITICAL | BLOCKER |
| BUG | 0 | 0 | 0 | 0 | 0 |
| VULNERABILITY | 0 | 0 | 0 | 0 | 0 |
| CODE\_SMELL | 0 | 1 | 14 | 0 | 0 |

## Issues List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Type | Severity | Number |
| Sections of code should not be commented out |  | CODE\_SMELL | MAJOR | 7 |
| Results that depend on random number generation should be reproducible |  | CODE\_SMELL | MAJOR | 2 |
| numpy.random.Generator should be preferred to numpy.random.RandomState |  | CODE\_SMELL | MAJOR | 4 |
| Important hyperparameters should be specified for machine learning libraries' estimators and optimizers |  | CODE\_SMELL | MAJOR | 1 |
| Local variable and function parameter names should comply with a naming convention |  | CODE\_SMELL | MINOR | 1 |

# Security Hotspots

## Security hotspots count by category and priority

|  |  |  |  |
| --- | --- | --- | --- |
| Category / Priority | LOW | MEDIUM | HIGH |
| LDAP Injection | 0 | 0 | 0 |
| Object Injection | 0 | 0 | 0 |
| Server-Side Request Forgery (SSRF) | 0 | 0 | 0 |
| XML External Entity (XXE) | 0 | 0 | 0 |
| Insecure Configuration | 0 | 0 | 0 |
| XPath Injection | 0 | 0 | 0 |
| Authentication | 0 | 0 | 0 |
| Weak Cryptography | 0 | 0 | 0 |
| Denial of Service (DoS) | 0 | 0 | 0 |
| Log Injection | 0 | 0 | 0 |
| Cross-Site Request Forgery (CSRF) | 0 | 0 | 0 |
| Open Redirect | 0 | 0 | 0 |
| Permission | 0 | 0 | 0 |
| SQL Injection | 0 | 0 | 0 |
| Encryption of Sensitive Data | 0 | 0 | 0 |
| Traceability | 0 | 0 | 0 |
| Buffer Overflow | 0 | 0 | 0 |
| File Manipulation | 0 | 0 | 0 |
| Code Injection (RCE) | 0 | 0 | 0 |
| Cross-Site Scripting (XSS) | 0 | 0 | 0 |
| Command Injection | 0 | 0 | 0 |
| Path Traversal Injection | 0 | 0 | 0 |
| HTTP Response Splitting | 0 | 0 | 0 |
| Others | 0 | 0 | 0 |

## Security hotspots List