

Bandit Static Code Analysis Report

Bandit Report

Run started:2024-12-09 23:20:29.296446

Test results:

>> Issue: [B608:hardcoded_sql_expressions] Possible SQL injection vector through string-based query construction.

Severity: Medium Confidence: Low

CWE: CWE-89 (<https://cwe.mitre.org/data/definitions/89.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/plugins/b608_hardcoded_sql_expressions.html

Location: ./Lambda_PushToAthena.py:69:12

```
68 # Step 2: Define the Athena query (make sure to adjust the query based on your table and columns)
```

```
69 query = f"""
```

```
70 SELECT *
```

```
71 FROM "default"."forest_weather_data_parquet"
```

```
72 WHERE year = '{year}' AND month = '{month}' AND day = '{day}'
```

```
73 """
```

```
74
```

>> Issue: [B105:hardcoded_password_string] Possible hardcoded password: "

Severity: Low Confidence: Medium

CWE: CWE-259 (<https://cwe.mitre.org/data/definitions/259.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/plugins/b105_hardcoded_password_string.html

Location: ./api_simdata_gen.py:12:24

```
11 AWS_ACCESS_KEY_ID = ""
```

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```
12 AWS_SECRET_ACCESS_KEY = ""
```

```
13
```

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./api_simdata_gen.py:19:11

```
18 LAT_LONG_POINTS = [
```

```
19     (round(random.uniform(45.53, 46), 10),
```

```
20     round(random.uniform(-77.5, -79), 10))
```

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./api_simdata_gen.py:20:11

```
19     (round(random.uniform(45.53, 46), 10),
```

```
20     round(random.uniform(-77.5, -79), 10))
```

```
21     for _ in range(100)
```

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>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./api_simdata_gen.py:65:23

```
64  humidity = round(base_humidity + humid_variation, 2)
```

```
65  wind_speed = round(random.uniform(20, 30), 2)
```

```
66
```

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./api_simdata_gen.py:102:40

```
101      'Data': json.dumps(mock_data),
```

```
102      'PartitionKey': str(random.randint(1, 100)) # Random Partition Key
```

```
103  })
```

>> Issue: [B108:hardcoded_tmp_directory] Probable insecure usage of temp file/directory.

Severity: Medium Confidence: Medium

CWE: CWE-377 (<https://cwe.mitre.org/data/definitions/377.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/plugins/b108_hardcoded_tmp_directory.html

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Location: ./kinesisagent_simdata_gen.py:7:16

6 # Log file path for Kinesis Agent

7 LOG_FILE_PATH = '/tmp/aws-kinesis-agent.log'

8

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./kinesisagent_simdata_gen.py:11:11

10 LAT_LONG_POINTS = [

11 (round(random.uniform(45.53, 46), 10),

12 round(random.uniform(-77.5, -79), 10))

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./kinesisagent_simdata_gen.py:12:11

11 (round(random.uniform(45.53, 46), 10),

12 round(random.uniform(-77.5, -79), 10))

13 for _ in range(100)

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>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./kinesisagent_simdata_gen.py:57:23

```
56  humidity = round(base_humidity + humid_variation, 2)
```

```
57  wind_speed = round(random.uniform(1, 30), 2)
```

```
58
```

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./kinesisagent_simdata_gen.py:64:26

```
63  if ffw_i == 0:
```

```
64      temperature = random.uniform(70, 80) # increase temperature to increase fire risk
```

```
65      ffw_i = calculate_ffwi(temperature, humidity, wind_speed)
```

>> Issue: [B311:blacklist] Standard pseudo-random generators are not suitable for security/cryptographic purposes.

Severity: Low Confidence: High

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CWE: CWE-330 (<https://cwe.mitre.org/data/definitions/330.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_calls.html#b311-random

Location: ./kinesisagent_simdata_gen.py:91:44

```
90         'Data': json.dumps(mock_data),
91         'PartitionKey': str(random.randint(1, 100)) # Random Partition Key
92     })
```

>> Issue: [B404:blacklist] Consider possible security implications associated with the subprocess module.

Severity: Low Confidence: High

CWE: CWE-78 (<https://cwe.mitre.org/data/definitions/78.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/blacklists/blacklist_imports.html#b404-import-subprocess

Location: ./static_code_analysis.py:3:0

```
2 from bandit.core import config as bandit_config
```

```
3 import subprocess
```

```
4 import os
```

>> Issue: [B607:start_process_with_partial_path] Starting a process with a partial executable path

Severity: Low Confidence: High

CWE: CWE-78 (<https://cwe.mitre.org/data/definitions/78.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/plugins/b607_start_process_with_partial_path.html

Location: ./static_code_analysis.py:14:0

```
13 # Run Bandit on the directory
```

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```
14 subprocess.run(["bandit", "-r", target_directory, "-f", "txt", "-o", output_file])
```

```
15
```

>> Issue: [B603:subprocess_without_shell_equals_true] subprocess call - check for execution of untrusted input.

Severity: Low Confidence: High

CWE: CWE-78 (<https://cwe.mitre.org/data/definitions/78.html>)

More Info: https://bandit.readthedocs.io/en/1.8.0/plugins/b603_subprocess_without_shell_equals_true.html

Location: ./static_code_analysis.py:14:0

```
13 # Run Bandit on the directory
```

```
14 subprocess.run(["bandit", "-r", target_directory, "-f", "txt", "-o", output_file])
```

```
15
```

Code scanned:

Total lines of code: 466

Total lines skipped (#nosec): 0

Total potential issues skipped due to specifically being disabled (e.g., #nosec BXXX): 0

Run metrics:

Total issues (by severity):

Undefined: 0

Low: 13

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Medium: 2

High: 0

Total issues (by confidence):

Undefined: 0

Low: 1

Medium: 2

High: 12

Files skipped (0):