

Assure DeFi™

The Verification **Gold Standard™**



Security Assessment **Joi AI Token**

December 6, 2023

Audit Status: Pass

Audit Edition: Standard



ASSURE DEFI™
THE VERIFICATION GOLD STANDARD

Risk Analysis

Classifications of Manual Risk Results

Classification	Description
● Critical	Danger or Potential Problems.
● High	Be Careful or Fail test.
● Low	Pass, Not-Detected or Safe Item.
● Informational	Function Detected

Manual Code Review Risk Results

Contract Privilege	Description
● Buy Tax	0%
● Sale Tax	2%
● Cannot Sale	Pass
● Cannot Sale	Pass
● Max Tax	10%
● Modify Tax	Detected
● Fee Check	Pass
● Is Honeypot?	Not Detected
● Trading Cooldown	Not Detected
● Can Pause Trade?	Pass
● Pause Transfer?	Not Detected
● Max Tx?	Pass
● Is Anti Whale?	Not Detected
● Is Anti Bot?	Not Detected

Contract Privilege	Description
● Is Blacklist?	Not Detected
● Blacklist Check	Pass
● is Whitelist?	Not Detected
● Can Mint?	Pass
● Is Proxy?	Not Detected
● Can Take Ownership?	Not detected
● Hidden Owner?	Not detected
● Owner	0x418A082210Feeb238522691C9956d14470960F49
● Self Destruct?	Not Detected
● External Call?	Not detected
● Other?	Not detected
● Holders	2
● Auditor Confidence	Low Risk
● KYC Present	Yes
● KYC URL	https://assureddefi.com/projects/joi-ai/

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.

Project Overview

Token Summary

Parameter	Result
Address	0xff51f8c96b2da5eb0daa1b008951f4b37295d3e7
Name	Joi AI
Token Tracker	Joi AI (JOI)
Decimals	18
Supply	1,000,000,000
Platform	Ethereum
compiler	v0.8.19+commit.7dd6d404
Contract Name	Joi
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://etherscan.io/ token/0xff51f8c96b2da5eb0daa1b008951f4b37295d3e7#code
Payment Tx	Corporate

Main Contract Assessed Contract Name

Name	Contract	Live
Joi AI	0xFF51F8c96b2dA5eb0dAa1b008951F4b37295d3e7	Yes

TestNet Contract Assessed Contract Name

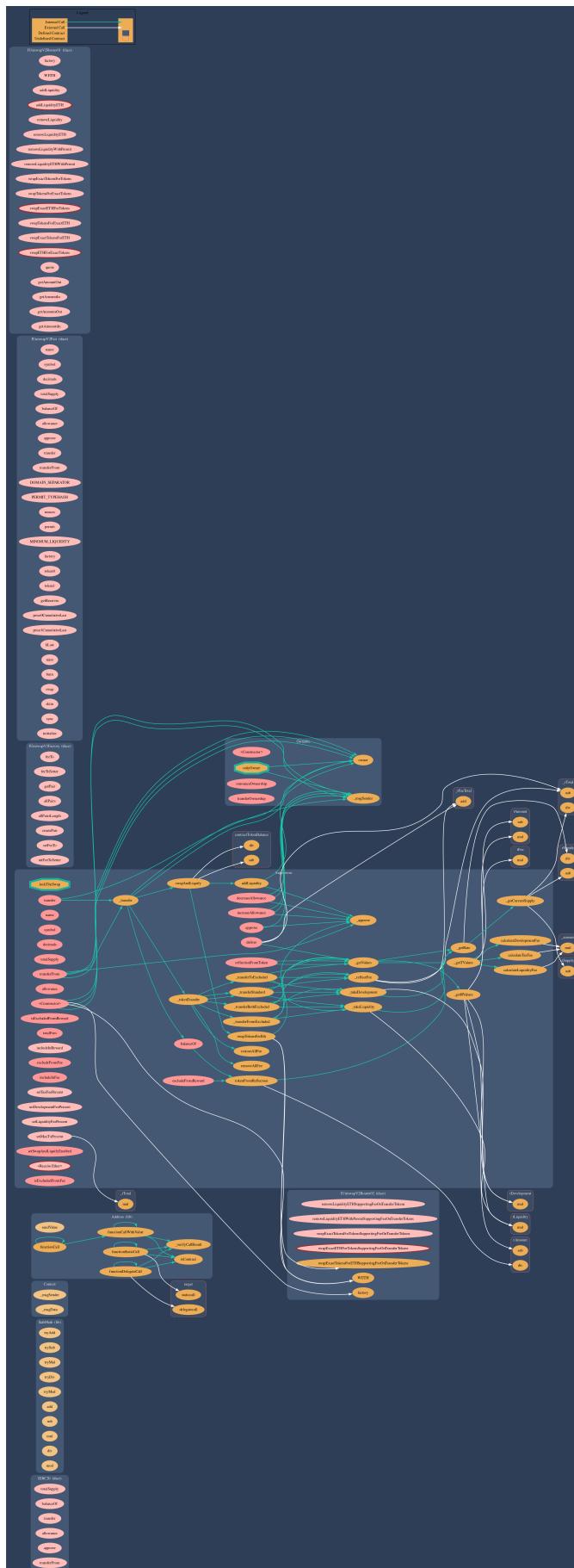
Name	Contract	Live
Joi AI	0x85B0016A58504B65cAc9ea6e488Bc6Df9F3Ce421	Yes

Solidity Code Provided

Solid ID	File Sha-1	FileName
JOI	25b591e2008538ddb365e79cf3f5c71ffe602012	Joi.sol
JOI		
JOI		
JOI		

Call Graph

The contract for Joi AI has the following call graph structure.



Smart Contract Vulnerability Checks

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	Joi.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	Joi.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	Joi.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	Joi.sol	L: 0 C: 0
SWC-104	Pass	Unchecked Call Return Value.	Joi.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	Joi.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	Joi.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	Joi.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	Joi.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	Joi.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	Joi.sol	L: 0 C: 0
SWC-111	Pass	Use of Deprecated Solidity Functions.	Joi.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	Joi.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	Joi.sol	L: 0 C: 0

ID	Severity	Name	File	location
SWC-114	Pass	Transaction Order Dependence.	Joi.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	Joi.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	Joi.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	Joi.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	Joi.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	Joi.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randomness.	Joi.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	Joi.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	Joi.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	Joi.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	Joi.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	Joi.sol	L: 0 C: 0
SWC-126	Pass	Insufficient Gas Griefing.	Joi.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	Joi.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	Joi.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	Joi.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U+202E).	Joi.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	Joi.sol	L: 0 C: 0

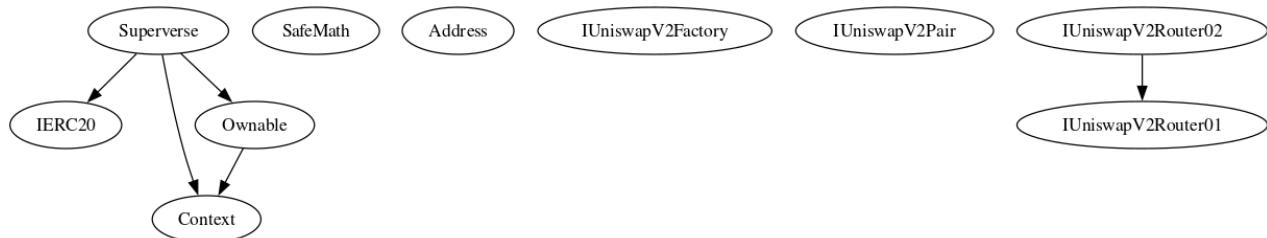
ID	Severity	Name	File	location
SWC-132	Pass	Unexpected Ether balance.	Joi.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	Joi.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	Joi.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	Joi.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	Joi.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.

Inheritance

The contract for Joi AI has the following inheritance structure.

The Project has a Total Supply of 1,000,000,000



Technical Findings Summary

Classification of Risk

Severity	Description
🔴 Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
🟠 High	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
🟡 Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
⚡ Low	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
ℹ️ Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

Findings

Severity	Found	Pending	Resolved
🔴 Critical	1	0	1
🟠 High	0	0	0
🟡 Medium	0	0	0
⚡ Low	0	0	0
ℹ️ Informational	0	0	0
Total	1	0	1

Social Media Checks

Social Media	URL	Result
Twitter	https://x.com/joiAI_token	Pass
Other	https://instagram.com/j0imoon	Pass
Website	https://joi.cool	Pass
Telegram	https://t.me/joi_ai	Pass

We recommend to have 3 or more social media sources including a completed working websites.

Social Media Information Notes:

Auditor Notes: undefined

Project Owner Notes:



Assessment Results

Score Results

Review	Score
Overall Score	100/100
Auditor Score	95/100
Review by Section	Score
Manual Scan Score	34
SWC Scan Score	37
Advance Check Score	36

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 84 Points for a higher standard, if a project does not attain 85% is an automatic failure. Read our notes and final assessment below.

Audit Passed



Assessment Results

Important Notes:

- Enable Trade is present.
- The project owner has enable trade. <https://etherscan.io/tx/0x6f653583551b702ceaba953a25c2a44ce0d95642f3755b8a25e44444880bb5f3>

**Auditor Score =95
Audit Passed**



Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that act against the nature of decentralization, such as explicit ownership or specialized access roles in combination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how `block.timestamp` works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invoke-able by anyone under certain circumstances.

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that may result in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different require statements on the input variables than a setter function.

Coding Best Practices

ERC 20 Coding Standards are a set of rules that each developer should follow to ensure the code meets a set of criteria and is readable by all the developers.

Disclaimer

Assure Defi has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocacy for the Project, and users relying on this report should not consider this as having any merit for financial advice in any shape, form, or nature. The contracts audited do not account for any economic developments that the Project in question may pursue, and the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude, and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are entirely free of exploits, bugs, vulnerabilities or depreciation of technologies.

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