

# Xiasi Inu Smart Contract Security Audit

Audit Report Aug, 2021



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## **Project Introduction**

The Xiasi Dog is respected by people due to the belief that the dog brings wealth to a family. The team behind Xiasi also aims to be well respected by its holders due to our openness, transparency and rewarding tokenomics. We are committed to not only build innovative utility (Xiasi merch, swap and IDO platform) but to give back wealth to the families that are most in need with charitable donations. The team strives to build a valued and thriving community of holders united behind our vision whilst engaging, building partnerships and providing the "fun factor" along the way.

	TOKEN AUDIT
Name	Xiasi Inu (XIASI)
Website	https://xiasi.finance/
Total Supply	600,000,000,000,000 [1 Quadrillion]
Туре	BSC Token
Platform	Ethereum / Solidity
Holders	10,720 addresses
Deployed Contract	0x0e20E3216EA172fcf9eAa19723b119e090fD353f

Token Audit Team performed a security audit for Xiasi Inu smart contracts during the period of Aug 16, 2021 to Aug 16, 2021.

The code for the audit was taken from following the official link:

https://github.com/InuXiasi/Xiasi-Inu-Contracts/blob/main/Xiasi.sol



## Auditing Methodologies applied:

- In this audit, we consider the following crucial features of the code.
- The overall quality of code.
- Whether the implementation of ERC 20/BEP 20 standards.
- Whether the code is secure.
- Gas Optimization
- Code is safe from reentrancy and other vulnerabilities

## Manual Audit

## **TOKEN AUDIT**

- Manually analyzing the source code line-by-line in an attempt to identify security vulnerabilities.
- Gas Consumption and optimization
- Assessing the overall project structure, complexity & quality.
- Checking whether all the libraries used in the code of the latest version.

## **Automated Audit**

- Projects can be Automated using these tools with Slither, Manticore, SolGraph others.
- Performing Unit testing.
- Symbolic execution, which is analyzing a program to determine what inputs cause each part of a program to execute.
- → Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.

## Static Analysis

Static Analysis of Smart Contracts was done to identify contract vulnerabilities. In this step a series of automated tools are used to test security of smart contracts.



## **Auditing Tools**

Language: Solidity

Platform and tools: Slither, Manti-Core, VScode, Solhint, Solc-select, Solidity-coverage

Audit Aim: The focus of the audit was to verify whether the smart contract is secure, resilient, and working according to the standard specs. The audit activity can be categories into three types

- Security
- Sound Architecture
- **TOKEN AUDIT** Code Correctness and Quality



## **Tokenomics:**

The tokenomics were as follows (in number of tokens):

1 Quadrillion Total Supply

8% Redistribution

4% Rewarded to holders

4% Added to Liquidity Pool





## **Issues Checking**

We have scanned this smart contract code for commonly known and more specific Vulnerabilities that are below listed:

SN	Issue Description	Status
1	Re-entrancy	Verified
2	Compiler errors	Verified
3	Timestamp Dependence	Verified
4	Unsafe external calls	Verified
5	Gas Limit and Loops	Verified
6	DoS with Block Gas Limit	Verified
7	Private user data leaks	Verified
8	Code clones, functionality duplication	Verified
9	Style guide violation	Verified
10	Costly Loop	Verified
11	Balance equality	Verified



12	Unchecked math	Verified
13	Integer overflow/underflow	Verified
14	Cross-function Race Condition	Verified
15	Fallback function security	Verified
16	Data Consistency TOKEN AU	Verified
17	Balance equality	Verified
18	ERC20 API violation	Verified
19	Deployment Consistency	Verified
20	Arithmetic accuracy	Verified
21	Transaction-Ordering Dependence (TOD) / Front Running	Verified
22	Address hardcoded	Verified
23	Scoping and Declarations	Verified
24	Implicit visibility level	Verified
25	Call Depth Attack (deprecated)	Verified



## Severity Issue Categories

Every issue in this report was assigned a severity level from the following:

Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to token loss etc.	
High	The issue affects the ability of the contract to compile or operate in a significant way.	
Medium	Issues on this level could potentially bring problems and should eventually be fixed.	
Low	Low-level vulnerabilities are mostly related to outdated, unused, etc. code snippets that can't have a significant impact on execution.	
Informational	The issue has no impact on the contract's ability to operate.	



#### **Issues Found**

• Critical severity issues - No Critical severity issues found.

High severity issues - 1 Critical severity issues found.

Medium severity issues - 1 medium severity issues found.

Low severity issues
 2 low severity issues were found.

Informational
 5 Informational severity issues were found

High	Medium	Low	Informational
1	1	2	5

## High level severity issues

1. Functions that send Ether to arbitrary destinations

Severity: High

Description: Unprotected call to a function sending Ether to an arbitrary address.

```
function addLiquidity(uint256 tokenAmount1, uint256 ethAmount1) private {
    // approve token transfer to cover all possible scenarios
    _approve(address(this), address(uniswapV2Router), tokenAmount1);

    // add the liquidity
    uniswapV2Router.addLiquidityETH{value: ethAmount1}(
        address(this),
        tokenAmount1,
        0, // slippage is unavoidable
        0, // slippage is unavoidable
        owner(),
        block.timestamp
    );
}
```

#### Suggestion:

Ensure that an arbitrary user cannot withdraw unauthorized funds.



## Medium level severity issues

#### 1. Reentrancy Attack

Severity: Medium

Description: Calling Xiasi.transfer() and Xiasi.transferFrom() might trigger function uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTo kens() and uniswapV2Router.swapExactETHForTokensSupportingFeeOnTransferTo kens(), which is implemented by a third party at uniswapV2Router. If there are vulnerable external calls in uniswapV2Router, reentrancy attacks could be conducted because these two functions have state updates and event emits after external calls.

The scope of the audit would treat the third-party implementation at uniswapV2Router as a black box and assume its functional correctness. However, third parties may be compromised in the real world that leads to assets lost or stolen.

```
function allowance(address owner1, address spender1) public view override returns (uint256) {

return _allowances[owner][spender1];

}

function transferFrom(address sender1, address recipient1, uint256 amount1) public override returns (bool) {

_transfer(sender1, recipient1, amount1);

_approve(sender1, _msgSender(), _allowances[sender1][_msgSender()].sub(amount1, "ERC20: transfer amount exceeds allowance"));

return true;

}
```

#### Remediation:

We recommend applying OpenZeppelin ReentrancyGuard library - nonReentrant modifier for the aforementioned functions to prevent reentrancy attacks.



## Low level severity issues

1. Unused code (or) Dead code

Severity: Low Description:

no state changes and has no side effects that alter data or control flow, such that removal of the code would have no impact on functionality or correctness

#### Remediation:

The program contains code that is not essential for execution, i.e., makes no state changes and has no side effects that alter data or control flow

2. State variables that could be declared constant

Severity: Low Description:

The above constant state variables should be declared constant to save gas.

- \_name
- \_symbol
- \_decimals
- \_tTotal



#### Remediation:

Add the constant attributes to state variables that never change

## Informational level severity issues

1. Variable Typos

Severity: Informational

**Description:** 

There are typos in the above variables

719

uint256 tokensIntoLiqudity

#### Remediation:

We recommend correcting and changing tokensIntoLiqudity to tokensIntoLiquidity

#### 2. Solidity naming conventions

Severity: Informational

**Description:** 

In the contract, many function names were found to be starting with capital letters Functions other than constructors should use mixedCase

Examples: getBalance, transfer, verifyOwner

#### Remediation:

Solidity naming convention

#### 3. Public function that could be declared external

Severity: Informational

**Description:** 

The following public functions that are never called by the contract should be declared external to save gas:



- totalFees()
- deliver()
- reflectionFromToken()
- tokenFromReflection()
- excludeFromReward()

#### Remediation:

Use the external attribute for functions never called from the contract

## 4. State Variable Default Visibility

Severity: Informational

**Description:** 

The default is internal for state variables, but it should be made explicit

```
708 bool inSwapAndLiquify;
709 bool public swapAndLiquifyEnabled = true;
710
```

#### Remediation:

We recommend adding the visibility for the state variable of inSwapAndLiquify.

5. pragma and Incorrect versions of Solidity

**Severity:** Informational

#### **Description:**

Solc frequently releases new compiler versions. Using an old version prevents access to new Solidity security checks. We also recommend avoiding complex pragma statements

```
pragma solidity ^0.6.12;
// SPDX-License-Identifier: Unlicensed
```

#### Remediation:

Compiles the latest version 0.8.4 only That we can find Errors easily.



## **Automated Testing**

We have to use Automated testing Slither. It is an Automated Analysis Tool in Smart Contract.

```
INFO:Detectors:
Colfioken.addLiquiditY(uint256,uint256) (Xiasi.sol#1093-1106) sends eth to arbitrary user
Dangerous calls:
- uniswap/ZRouter.addLiquidityETH(value: ethamount)(address(this),tokenAmount,0,0,owner(),block.timestamp) (Xiasi.sol#1098-1105)
Reference: https://github.com/crytic/slither/miki/Detector-Documentation#functions-that-send-ether-to-arbitrary-destinations
INFO:Detectors:
Reternal calls:
- swapAndLiquify(contractTokenBalance) (Xiasi.sol#1037)
- uniswap/ZRouter.addLiquiditYETH(value: ethamount)(address(this),tokenAmount,0,0,owner(),block.timestamp) (Xiasi.sol#1098-1

105)
- uniswap/ZRouter.addLiquiditYETH(value: ethamount)(address(this),tokenAmount,0,path,address(this),block.timestamp) (Xiasi.sol#1098-1

105)
- uniswap/ZRouter.addLiquiditYETH(value: ethamount)(address(this),tokenAmount,0,path,address(this),block.timestamp) (Xiasi.sol#1098-1

105)
- vuniswap/ZRouter.addLiquiditYETH(value: ethamount)(address(this),tokenAmount,0,0,owner(),block.timestamp) (Xiasi.sol#957)
- volkenTransfer(from,to,amount,takefee) (Xiasi.sol#1049)
- volkenTransfer(from,to,amount,takefee) (Xiasi.sol#1049)
- volkenTransfer(from,to,amount,takefee) (Xiasi.sol#1049)
- volkenTransfer(from,to,amount,takefee) (Xiasi.sol#1049)
- volkenTransfer(from,
```



```
Variable CoinToken. taxFee (Xiasi.sol#099) is not in mixedCase
Variable CoinToken. LiquidityFee (Xiasi.sol#02) is not in mixedCase
Variable CoinToken. maxYxAmount (Xiasi.sol#711) is not in mixedCase
Variable CoinToken. maxYxAmount (Xiasi.sol#711) is not in mixedCase
Variable CoinToken. maxYxAmount (Xiasi.sol#211) is not in mixedCase
Variable CoinToken. maxYxAmount (Xiasi.sol#241)* inContext (Xiasi.sol#235-244)
Variable CoinToken. maxYxAmount (Xiasi.sol#241)* inContext (Xiasi.sol#235-244)
Variable IUniswapVZRouter01.addLiquidity(address, address, uint256, uint256, uint256, address, uint256).amountADesired (Xiasi.sol#544) is
variable IUniswapVZRouter01.addLiquidity(address, address, uint256, uint256, uint256, uint256, address, uint256).amountADesired (Xiasi.sol#545)
Variable CoinToken. transferFromExcluded(address, address, uint256).rTransferAmount (Xiasi.sol#1149) is too similar to CoinToken. transferStandard(address, address, uint256).rTransferAmount (Xiasi.sol#1130) is too similar to CoinToken. transferStandard(address, address, uint256).rTransferAmount (Xiasi.sol#1130) is too similar to CoinToken. transferStandard(address, address, uint256).rTransferAmount (Xiasi.sol#1130) is too similar to CoinToken. transferStandard(address, address, uint256).rTransferAmount (Xiasi.sol#1130) is too similar to CoinToken. transferFomExcluded(address, address, uint256).rTransferAmount (Xiasi.sol#1130)
Variable CoinToken. transferFomExcluded(address, address, uint256).rTransferAmount (Xiasi.sol#133) is too similar to CoinToken. transferBothExcluded(address, address, uint256).tTransferAmount (Xiasi.sol#130)
Variable CoinToken. reflectionFromToken(uint256, uint256, uint256).rTransferAmount (Xiasi.sol#33) is too similar to CoinToken. transferStandard(address, address, uint256).tTransferAmount (Xiasi.sol#130)
Variable CoinToken. transferFomExcluded(address, address, uint256).rTransferAmount (Xiasi.sol#130)
Variable CoinToken. transferFomExcluded(address, address, uint256).rTransferAmount (Xiasi.sol#130)
Variable CoinToken. transfer
```





### **Solhint Tool:**

A linter for Solidity that provides both Security and Style Guide validations.

```
Compiler version ^0.6.12 does not satisfy the ^0.5.8 semver requirement compiler-version
   160:9
                          warning Error message for require is too long warning Error message for require is too long
                                                                                                                                                                                                                                                              reason-string
   300:9
                       warning Error message for require is too long
warning Error message for require is too long
warning Avoid to make time-based decisions in your business logic
   357:9
                                                                                                                                                                                                                                                              reason-string
   437:9
                                                                                                                                                                                                                                                             reason-string
not-rely-on-time
                        warning Error message for require is too long warning Avoid to make time-based decisions in your business logic warning Function name must be in mixedCase
                                                                                                                                                                                                                                                             reason-string
not-rely-on-time
  457:17
                                                                                                                                                                                                                                                              func-name-mixedcase
 499:5 warning Function name must be in mixedCase
500:5 warning Function name must be in mixedCase
517:5 warning Function name must be in mixedCase
539:5 warning Function name must be in mixedCase
677:1 warning Function name must be in mixedCase
677:1 warning Function name must be in mixedCase
677:1 warning Function name must be in mixedCase
728:18 warning Function name must be in mixedCase
728:18 warning Function name must be in mixedCase
728:19 warning Function name must be in mixedCase
728:10 warning Function name must be in mixedCase
                                                                                                                                                                                                                                                              func-name-mixedcase
                                                                                                                                                                                                                                                              func-name-mixedcase
                                                                                                                                                                                                                                                             func-name-mixedcase
                                                                                                                                                                                                                                                             max-states-count
                                                                                                                                                                                                                                                              state-visibility
                                                                                                                                                                                                                                                              var-name-mixedcase
  728:62 warning Variable name must be in mixedCase
728:128 warning Variable name must be in mixedCase
728:147 warning Variable name must be in mixedCase
                                                                                                                                                                                                                                                             var-name-mixedcase
                                                                                                                                                                                                                                                             var-name-mixedcase
                                                                                                                                                                                                                                                             var-name-mixedcase
  822:9 warning Error message for require is too long
                                                                                                                                                                                                                                                             reason-string
  841:9 warning error message for require is too long 999:9 warning Code contains empty blocks error message for require is too long
                                                                                                                                                                                                                                                            reason-string
no-empty-blocks
                         warning Error message for require is too long warning Error message for require is too long warning Error message for require is too long
                                                                                                                                                                                                                                                             reason-string
1000:9
1011:9
                                                                                                                                                                                                                                                            reason-string
                                                                                                                                                                                                                                                             reason-string
                       warning Error message for require is too long
warning Error message for require is too long
warning Avoid to make time-based decisions in your business logic
warning Avoid to make time-based decisions in your business logic
                                                                                                                                                                                                                                                             reason-string
1015:13
                                                                                                                                                                                                                                                            reason-string
not-rely-on-time
1089:13
                                                                                                                                                                                                                                                              not-rely-on-time
```



## **Functional View**

Function	Return Type	Test Result
name	Public	Verified
symbol	Public	Verified
decimals	Public	Verified
totalSupply	Public	Verified
balanceOf	Public	Verified
transfer	Public	Verified
allowance	Public	Verified
approve	Public	Verified
TransferFrom	Public	Verified
increaseAllowance	Public	Verified
decreaseAllowance	Public	Verified
isExcludedFromReward	Public	Verified
totalFees	Public	Verified
deliver	Public	Verified
reflectionFromToken	Public	Verified

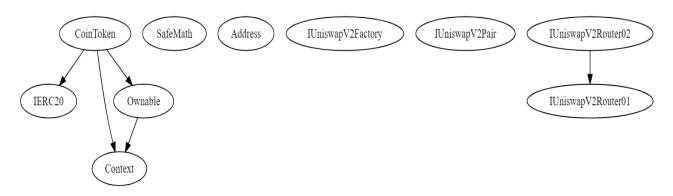


tokenFromReflection	Public	Verified
excludeFromReward	Public	Verified
includeInReward	Public	Verified
transferBothExcluded	Public	Verified



# TOKEN AUDIT

## **Inheritance Chart**





## **Audit Findings Results**

There were 1 high and 1 Medium and 2 Low and 5 Low issues found during the audit. All the mentioned findings may have an effect only in case of specific conditions performed by the contract owner. None of the critical issues were resolved.

Generally, the contracts are well written and structured. The findings during the audit have some impact on contract performance or security

#### Disclaimer

This audit does not provide a security or correctness guarantee of audited smart contracts You agree that your access and/or use, including but not limited to any services, products, platforms, content, will be at your Own risk. Smart contract remains under development and is subject to unknown risks and flaws. The review does not extend to the compiler layer, or any other areas beyond the programming language aspects that could present security risks. A report does not indicate the endorsement of any particular project or team, nor guarantee its security.



http://tokenaudit.net/



https://t.me/TokenAuditt



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