



Climate Tracksmart using Blockchain

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Abstract

As the global community grapples with the urgent challenges of climate change, innovative technologies such as blockchain are increasingly being explored to enhance the transparency, accountability, and efficiency of climate action initiatives. This paper introduces the concept of "Climate Tracks for Blockchain," a novel framework that leverages blockchain technology to revolutionize the way we monitor and manage climate-related data .



Problem statement

How might we leverage blockchain technology within Climate Tracks mart to address the challenges of transparency, data security, and scalability while promoting eco-friendly behavior and ensuring regulatory compliance in the context of environmental tracking and climate change mitigation?

Scope of the project

Blockchain's scope for climate tracking is extensive, encompassing carbon emission monitoring, renewable energy management, supply chain sustainability, forestry and land use tracking, climate finance, carbon offsets, climate data verification, international collaboration, incentive mechanisms, disaster resilience, environmental certifications, and climate research. By providing a transparent, secure, and decentralized platform, blockchain technology can revolutionize the way we monitor, incentivize, and verify climate-related actions, making it a powerful tool in the global fight against climate change and fostering sustainability across various sectors and initiatives.





Steps to complete the project

Step 1:-

Open the Zip file and download the zip file. Extract all zip files

Step 2 :

1. Open vs code in the left top select open folder. Select extracted file and open .
2. Select the projectname.sol file and copy the code.
3. Open the remix ide platform and create a new file by giving the name of projectname.sol and paste the code which you copied from vs code.
4. Click on solidity compiler and click compile the projectname.sol
5. Deploy the smart contract by clicking on the deploy and run transaction.
6. select injected provider - MetaMask. In environment
7. Click on deploy. Automatically MetaMask will open and give confirmation. You will get a pop up click on ok.
8. In the Deployed contract you can see one address copy the address.
9. Open vs code and search for the connector.js. In contract.js you can paste the address at the bottom of the code. In export const address.
10. Save the code.

Step 3:

open file explorer

1. Open the extracted file and click on the folder.
2. Open src, and search for utiles.
3. You can see the frontend files. Select all the things at the top in the search bar by clicking alt+ A. Search for cmd
4. Open cmd enter commands `npm install npm bootstrap npm start`
5. It will install all the packages and after completing it will open {LOCALHOST IP ADDRESS} copy the address and open it to chrome so you can see the frontend of your project.



Output

Climate Change

Enter climate Details


Add Climate Data

Update existing climate Details

Update Climate Data

Connect Wallet

Get Climate Data



Conclusion

In conclusion, the integration of blockchain technology into climate tracking holds immense promise for addressing the pressing challenges of climate change. By providing a secure, transparent, and decentralized framework, blockchain can enhance the accuracy, accountability, and efficiency of climate-related initiatives. It offers the potential to revolutionize how we monitor carbon emissions, manage renewable energy resources, ensure supply chain sustainability, track reforestation efforts, and facilitate international collaboration. Additionally, blockchain's incentive mechanisms and data verification capabilities can motivate individuals and organizations to adopt more sustainable practices while ensuring the integrity of climate data. However, the successful implementation of climate tracking using blockchain will require addressing technical, regulatory, and privacy considerations. Despite these challenges, blockchain's potential to revolutionize climate tracking

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You

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