

Alchemy University – Ethereum Developer Bootcamp
Final Project – (2023-08)

DockChain

A FullStack dApp

DockChain

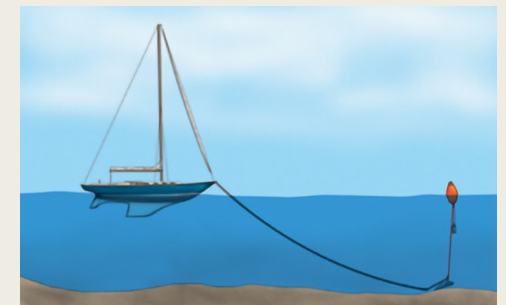
Boat Mooring Registration Service Made Simple and transparent



- **Full Stack Dapp**

- *Backend: Solidity*
- *Frontend: React*
- *Other: Hardhat, Alchemy API, Bulma*

- **A Boat Mooring Registration Service dApp available on the Ethereum Blockchain**



Problem Statement:



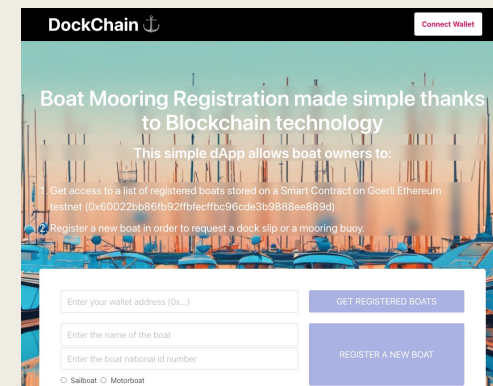
- Small boat owners struggle to secure mooring slots in a marina due to:
 - *Unclear waiting list and lack of transparency in mooring slot allocation*
 - *Complicated access to waiting list status accross various marinas*

- Imagine:
 - *You are a Small boat owner and want to register your new boat to get a mooring slot in a marina close to you*
 - *You need to call the various marinas to check the status (often crowded and need to register to be on a wait list)*
 - *Then wait and hope the allocation process will be fair and that you will get a mooring slot in some years*



DockChain solution:

- A boat mooring registration service dApp on the blockchain that solves these problems:

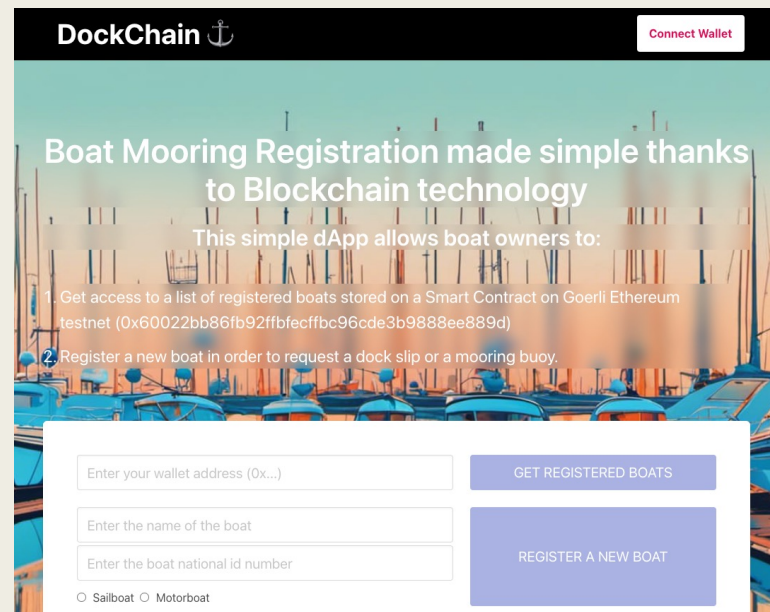


Pain	Before DockChain	With DockChain	Comment
Time required to register	Long (phone call or in-person visit)	Quick (< 5 minutes)	
Potential allocation manipulation (Transparency / Trust)	Possible	Impossible	Transparent process with real-time updates
Security	Low	High	Secure data storage on blockchain
Access to waiting lists status	Complicated and time consuming (phone / visits)	Instant access (User friendly dApp)	Convenient access to wait lists


Value proposition: « DockChain simplifies boat mooring registration by offering an easy, secure, and transparent platform that saves time and builds trust between boat owners and marinas. »

DockChain Demo:

- Watch the video



The screenshot shows the DockChain web application interface. At the top, there is a black header with the "DockChain" logo and an anchor icon on the left, and a "Connect Wallet" button on the right. The main content area has a background image of a marina with many boats. The text "Boat Mooring Registration made simple thanks to Blockchain technology" is prominently displayed. Below this, it states "This simple dApp allows boat owners to:" followed by two numbered steps: 1. Get access to a list of registered boats stored on a Smart Contract on Goerli Ethereum testnet (0x60022bb86fb92ffbfcffbc96cde3b9888ee889d) and 2. Register a new boat in order to request a dock slip or a mooring buoy. At the bottom, there is a white form with three input fields: "Enter your wallet address (0x...)", "Enter the name of the boat", and "Enter the boat national id number". To the right of the first field is a blue button labeled "GET REGISTERED BOATS". To the right of the other two fields is a larger blue button labeled "REGISTER A NEW BOAT". At the very bottom, there are two radio buttons labeled "Sailboat" and "Motorboat".

DockChain  [Connect Wallet](#)

Boat Mooring Registration made simple thanks to Blockchain technology

This simple dApp allows boat owners to:

1. Get access to a list of registered boats stored on a Smart Contract on Goerli Ethereum testnet (0x60022bb86fb92ffbfcffbc96cde3b9888ee889d)
2. Register a new boat in order to request a dock slip or a mooring buoy.

[GET REGISTERED BOATS](#)

[REGISTER A NEW BOAT](#)

☐ Sailboat ☐ Motorboat

Next Steps:

- Style DockChain dApp
- Add some « require » to Smart Contract to make sure only relevant data is registered
- Add further functionalities already in the Smart Contract to the frontend part (marina available slots etc...)
- Add « FAQ » and « documentation » pages to the dApp
- Give the possibility to boat owners to create an NFT for their boat (NFT will include boat characteristics)
- Give the possibility to marina operator to create NFTs for mooring slots to facilitate mooring slot allocation (allowed boat size, location etc...)
- Create a market place to allow boat owners to rent out their mooring slots for short period of time when they do not use it

Various links

Description	Link
Project Repo on GitHub	https://github.com/xavsIn/DockChain
Smart Contract address on Goerli	0x60022bb86fb92ffbfecffbc96cde3b9888ee889d
Smart Contract data on Etherscan	https://goerli.etherscan.io/address/0x60022bb86fb92ffbfecffbc96cde3b9888ee889d
Live dApp	TBD

Thank you !

