

# AGNEL INSTITUTE OF TECHNOLOGY AND DESIGN

Assagao, Goa – 403507  
Electronics and Communication Engineering

## Internship Viva Presentation (2025–26)

Industry Mentor

**Mr. DEVANSHU JOSHI**  
Founder, iMeta Technologies,  
Mapusa, Goa

Faculty Mentor

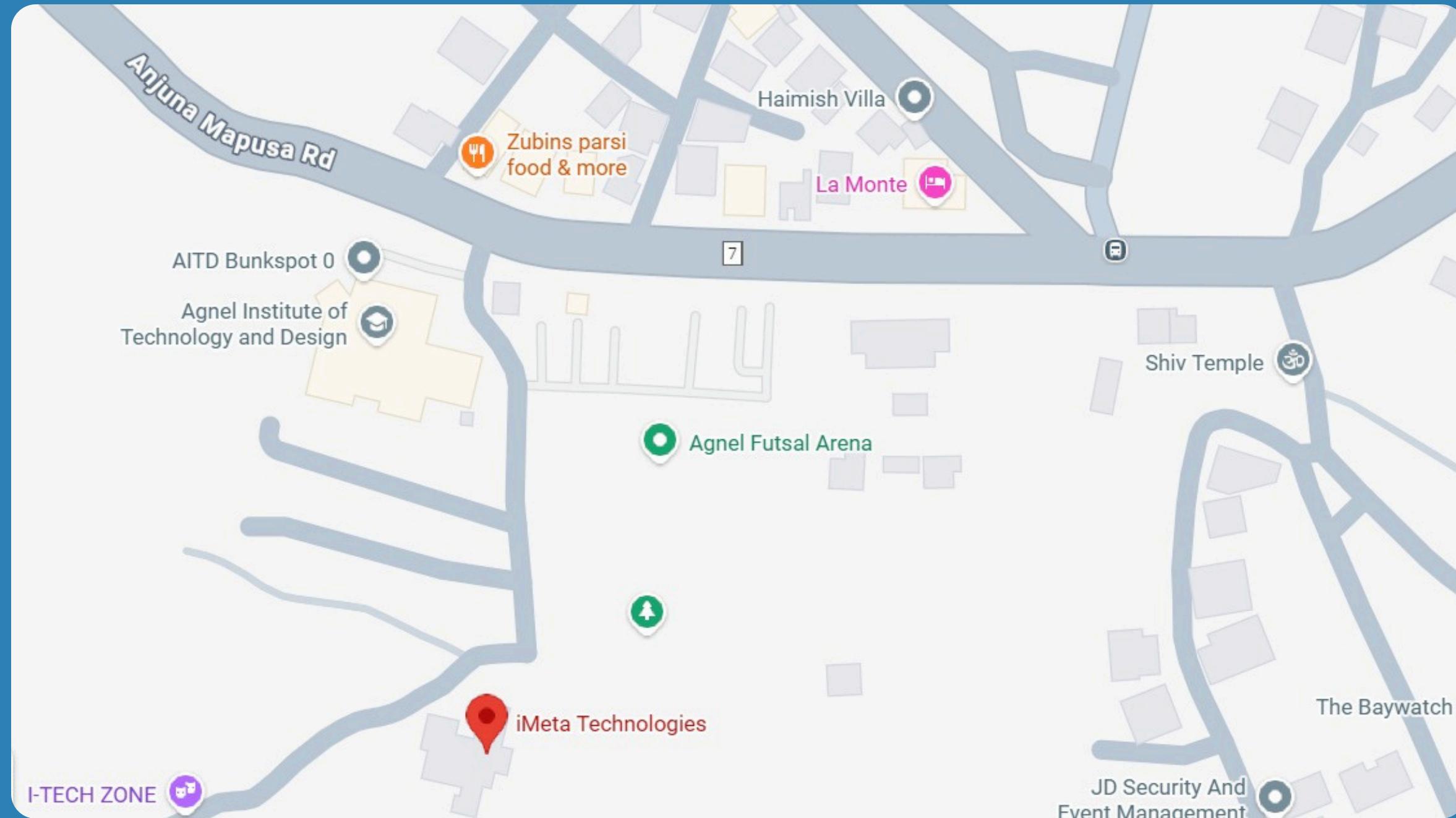
**Mrs. NORA NAIK**  
Asst. Professor  
Computer Department

Presented by: **EDRIC PETER COELHO (22CO12)**

Web  
Development  
Internship



# Company Location and Internship Mode



**Company Location:**  
iMeta Technologies, Mapusa,  
Goa, India

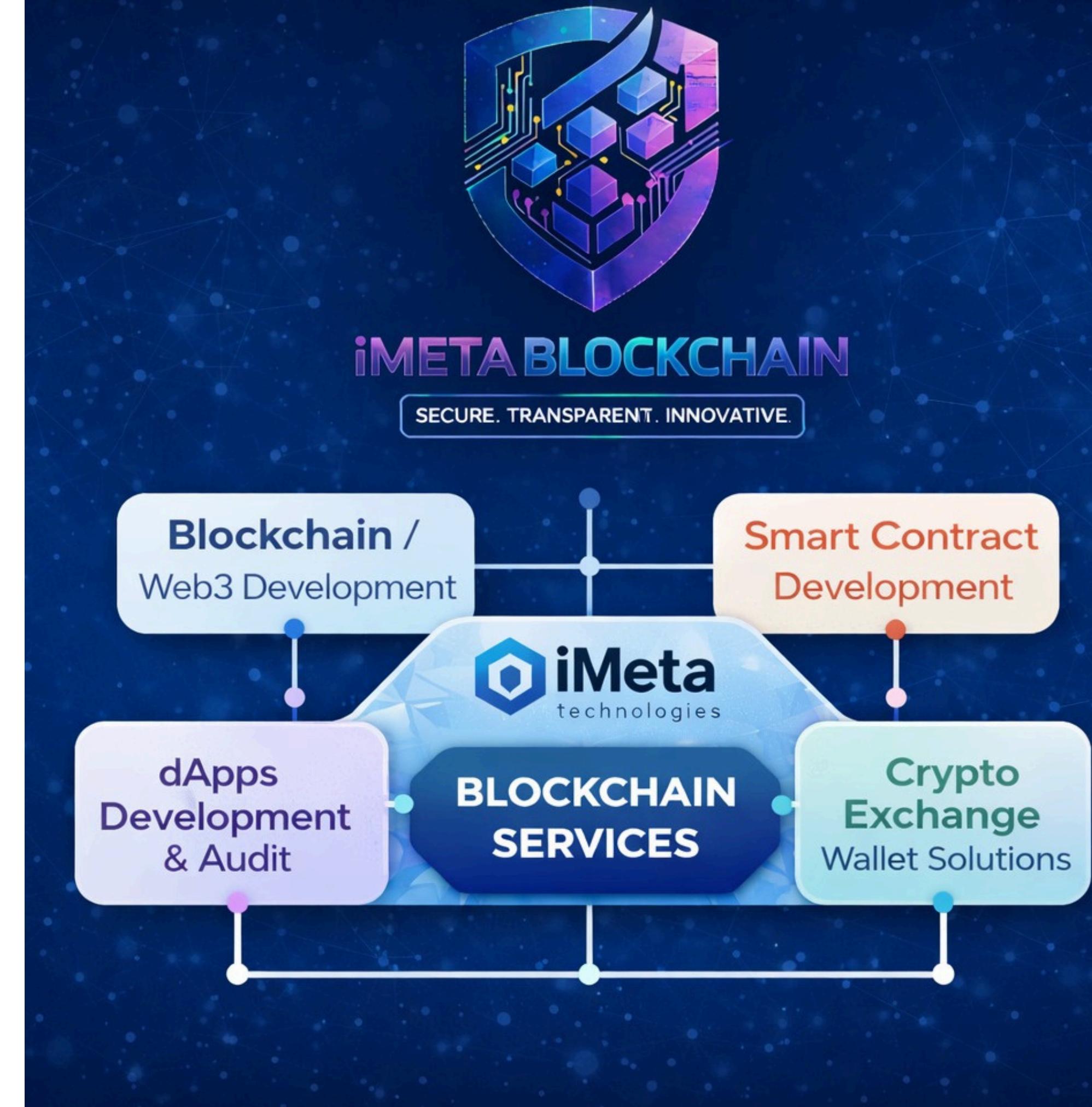
**Mode of Internship:**  
Offline (On-site)

**Internship Duration:**  
14 July 2025 – 06 September  
2025 (8 Weeks)

**Internship Role:**  
Full-Stack Web3 Developer

# Mentorship Experience & Service Portfolio

During the internship, I received direct mentorship from **Mr. Devanshu Joshi**, the founder of iMeta Technologies. This experience fostered my independence and enhanced my skills through regular discussions and constructive feedback.



# Weeks 1-4 Overview

## WEB WALLET & TRANSACTION LEDGER

### Introduction to Blockchain

During the first week, I was introduced to blockchain technology, exploring fundamental principles, decentralization, and its transformative potential in various industries.

### Backend Development

Weeks 2 focused on backend development using Node.js, Express, and MongoDB, where I learned to create RESTful APIs to facilitate communication between the front end and the blockchain.

### Frontend Development

In weeks 3 and 4, I transitioned to frontend development using React.js, gaining hands-on experience in building user interfaces that interact seamlessly with the blockchain components.

### Web3 Integration

My work included integrating Web3 functionalities with MetaMask and ethers.js to enable user interactions with the blockchain, enhancing the overall user experience in the decentralized application.



## Wallet Manager

Enter Name:

**Send Tokens**

Recipient Address:

Amount:  BNB

**Verify Transaction**

Transaction Hash:

## Wallet Manager

sahil

**Address:** 0xa43477e8E849a2Df7D18b2226536268cecF3A6a3  
**Private Key:** 0xecdc47a4c1c66344ed98e15c17c537ddb9ac6f7827b81a5ff861f39102046485  
**Mnemonic:** hungry basic person left arrive blush mimic skill taste scheme hand find

Scan to copy wallet

**BNB:** 0.001066245  
**USDT:** 51.0  
**USDC:** 2.0

Scan to copy wallet

**BNB:** 0.001066245  
**USDT:** 51.0  
**USDC:** 2.0

**Send Tokens**

0xd1DA742373108cC97B23C3C88f0F9E7419Cb6DD4

1

**TX Hash:** [0xc29a9e277bb818a5354c2bf2534e8a96e32ee555b48fabb36753155ebf5b2718](#)

**Verify Transaction**

0xc29a9e277bb818a5354c2bf2534e8a96e32ee555b48fabb36753155ebf5b2718

## Wallet Manager

sahil

**Address:** 0xa43477e8E849a2Df7D18b2226536268cecF3A6a3  
**Private Key:** 0xecdc47a4c1c66344ed98e15c17c537ddb9ac6f7827b81a5ff861f39102046485  
**Mnemonic:** hungry basic person left arrive blush mimic skill taste scheme hand find  
**BNB:** 0.00127602  
**USDT:** 4.0  
**USDC:** 3.0

**Send Tokens**

0xd1DA742373108cC97B23C3C88f0F9E7419Cb6DD4

1

**TX Hash:** [0x24770bd6c7ac5ba3013c7818ebb9edfa4ec9e0ae203613c391c8c40488b3befc](#)

# BNB Wallet Manager

Generate Wallet

Fetch Wallet

## Wallet Info

**Name:** sahil

**Address:** 0xa43477e8E849a2Df7D18b2226536268cecF3A6a3

**Private Key:** 0xecdc47a4c1c66344ed98e15c17c537ddb9ac6f7827b81a5ff861f39102046485

**Mnemonic:** hungry basic person left arrive blush mimic skill taste scheme hand find

**Balance:** 0.0017979 BNB

### Send BNB



Send Tokens

## Find or Create a Wallet

+ Create

Fetch

### Send Tokens

Recipient Address

BNB

Send Transaction

### Verify Transaction

Paste Transaction Hash

Verify

### Wallet Information

Address

0xa43477e8E849a2Df7D18b2226536268cecF3A6a3

Private Key

0xecdc47...

Mnemonic

hungry basic...

Show QR

Show History

BNB:

0.00229615

USDT:

23.0

USDC:

20.0

## Transaction History

### RECEIVED

1.0 USDT

From: 0x6c0236A49D1cE58561E832015d94450B199CA888

Status: Success

7/24/2025, 3:19:50 PM

### RECEIVED

1.0 USDT

From: 0x6c0236A49D1cE58561E832015d94450B199CA888

Status: Success

7/24/2025, 1:01:50 PM

### SENT

1 USDT

To: 0xd1DA742373108cC97B23C3C88f0F9E7419Cb6DD4

Status: Pending

### verifiedtxes

_id	ObjectId	txHash	String	from	String	to	String	value	String
	objectId('6880000000000000')	"0xc01a843a102eae019c4089c...	"0xa43477e8E849a2Df7D18b2...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"0x342e3aA1248AB77E319e33...	"0x342e3aA1248AB77E319e33...	"5"	"5"
	ObjectId('68800fe7a8902a1...')	"0x65744651ed3368287078cf...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"0x342e3aA1248AB77E319e33...	"0x342e3aA1248AB77E319e33...	"20.0"	"20.0"	"20.0"
	ObjectId('6880a7f7a8902a1...')	"0x9ca587ddacf84630936705...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"0xa43477e8E849a2Df7D18b2...	"0xa43477e8E849a2Df7D18b2...	"0.0014"	"0.0014"	"0.0014"
	ObjectId('6880b58ea8902a1...')	"0xdb048e5165990991c6c9e3...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"0x787A697324dbA4AB965C58...	"0x787A697324dbA4AB965C58...	"1.0"	"1.0"	"1.0"
	ObjectId('6880b8e0a8902a1...')	"0xcd2460628167b374d1d644...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"0x787A697324dbA4AB965C58...	"0x787A697324dbA4AB965C58...	"1.0"	"1.0"	"1.0"
	ObjectId('6880baf6a8902a1...')	"0x2bc524a0408cd95378b918...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"0x787A697324dbA4AB965C58...	"0x787A697324dbA4AB965C58...	"1.0"	"1.0"	"1.0"
	ObjectId('6880bd560a36b2d...')	"0x3fa7b846eed2f71d5e9c08...	"0xa43477e8E849a2Df7D18b2...	"0xa43477e8E849a2Df7D18b2...	"0x787A697324dbA4AB965C58...	"0x787A697324dbA4AB965C58...	"1.0"	"1.0"	"1.0"
	ObjectId('6881d4c5767a4a7...')	"0xac3aaa558cdb85b227c846...	"0xa43477e8E849a2Df7D18b2...	"0xa43477e8E849a2Df7D18b2...	"0x787A697324dbA4AB965C58...	"0x787A697324dbA4AB965C58...	"2.0"	"2.0"	"2.0"
	ObjectId('6881d75859a1426...')	"0xd9bf43c2079d786c312264...	"0xa43477e8E849a2Df7D18b2...	"0xa43477e8E849a2Df7D18b2...	"0xd1DA742373108cC97B23C3...	"0xd1DA742373108cC97B23C3...	"2"	"2"	"2"

# Weeks 5-8 Progress

## DECENTRALIZED ESCROW AGREEMENT SYSTEM

### Smart Contract Development



During these weeks, I developed smart contracts for a Decentralized Escrow Agreement System, focusing on ensuring secure and efficient transactions on the blockchain platform.

### Authentication System



An authentication system was implemented utilizing JWT to ensure secure user access, establishing robust backend logic for identity verification throughout the application.

### Frontend Dashboard



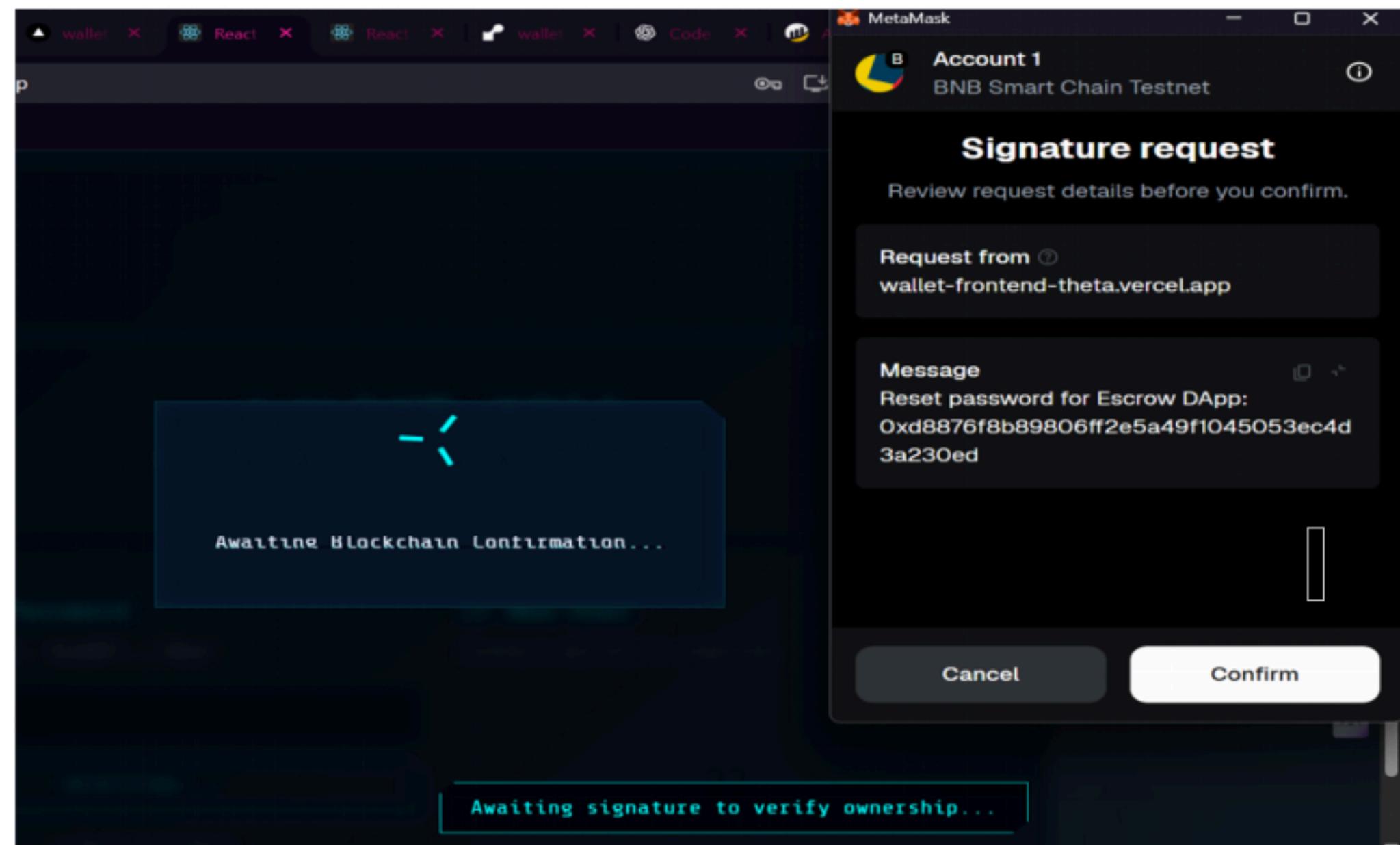
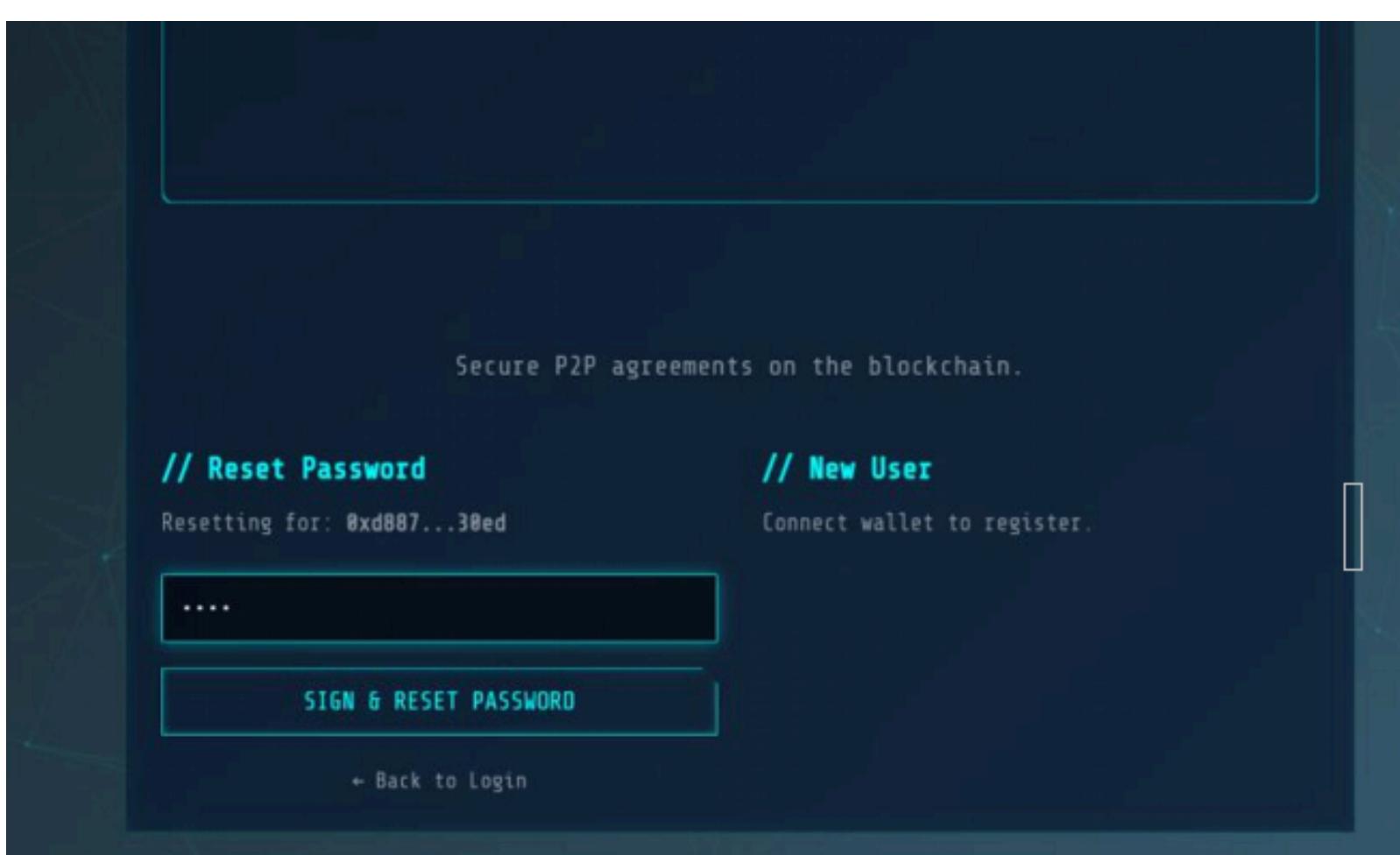
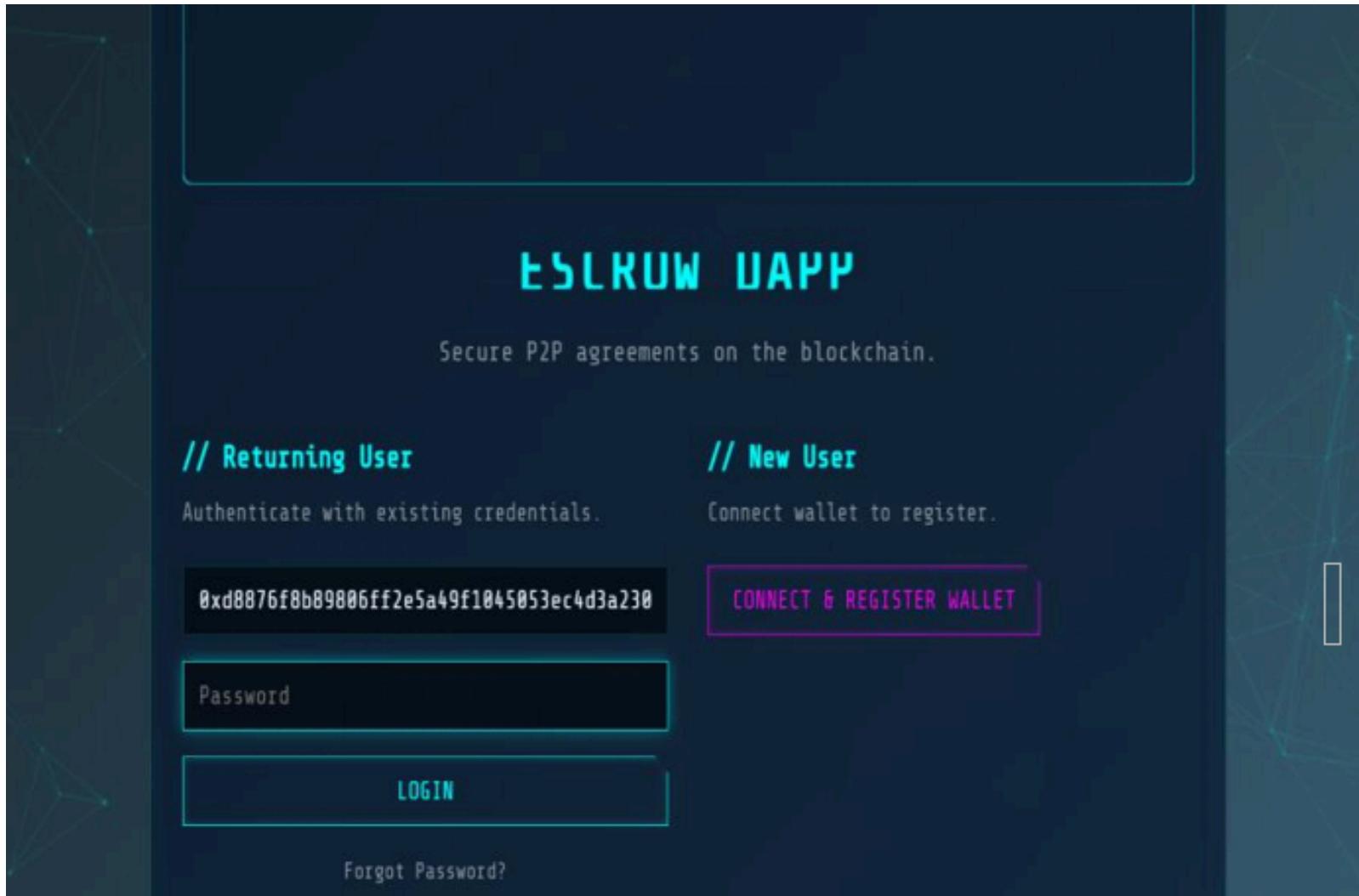
Designed and developed a comprehensive frontend dashboard using React, enabling intuitive user interactions and effective management of escrow agreement related activities within the decentralized application.

### End-to-End Integration



The culmination of the internship involved integrating all components, leading to thorough testing and deployment of the application, ensuring a seamless user experience and functionality.

# LOGIN PAGE



# MAIN DASHBOARD

The dashboard features a header with the user's address (0xd887...30ed) and a [LOGOUT] button. Below the header are two main sections: // Balances and // Your Agreements.

**// Balances**  
BNB: 0.0033  
USDT: 82.00  
USDC: 80.00  
REFRESH

**// Your Agreements**  
EXPIRED 2 USDT  
Depositor: 0xd887...30ed  
Beneficiary: 0xcf9e...c75e  
Arbiter: 0x842b...6b46  
FUNDING DEADLINE: TIME EXPIRED  
AGREEMENT EXPIRED

**// Create New Escrow**  
My Role: Depositor (selected), Arbiter, Beneficiary  
0xd887...30ed

A modal dialog titled "Deploy a contract" from "wallet-frontend-theta.vercelapp". It shows the account details (Account 1, BNB Smart Chain Testnet) and the transaction parameters:

- Request from: wallet-frontend-theta.vercelapp
- Network fee: \$0.84 BNB
- Speed: Market ~1 sec

Buttons: Cancel, Confirm. Status bar at the bottom: 1/3: Deploying escrow contract...

The screen is titled // Create New Escrow. The user's role is set to Depositor. The deposit amount is 1 USDT.

My Role: Depositor (selected), Arbiter, Beneficiary

0xd887...30ed

1 USDT

CREATE AGREEMENT

The screen is titled // Your Agreements. It displays two escrow agreements:

**CREATED** 1 USDT

Depositor: 0xd887...30ed  
Beneficiary: 0xcf9e...c75e  
Arbiter: 0x842b...6b46  
FUNDING DEADLINE: 01:51

**FUND ESCROW**

**EXPIRED** 2 USDT

Depositor: 0xd887...30ed  
Beneficiary: 0xcf9e...c75e

# DATABASE

## User login details

The screenshot shows the MongoDB Compass interface with the 'users' collection selected. The interface includes a header with tabs for 'Documents' (4), 'Aggregations', 'Schema', 'Indexes' (4), and 'Validation'. Below the header is a search bar with placeholder text 'Type a query: { field: 'value' } or [Generate query](#)'. There are buttons for 'Explain', 'Reset', and 'Find'. At the bottom are buttons for 'ADD DATA', 'EXPORT DATA', 'UPDATE', and 'DELETE'. The document list shows three users:

```
_id: ObjectId('68b95e23c0a3e685e8146b9e')
address : "0xd8876f8b89896ff2e5a49f1845853ec4d3a238ed"
username : "edric"
email : "edric12@gmail.com"
password : "52b$184gFQwXTjd9to5xRnwtn88e0f8918d0IRFnq2DUj6Ha5Lcugw83cxIw"
__v : 0

_id: ObjectId('68b966cc89c26e1a22a2783d')
address : "0x42b6e8ba000962c18dd7a51ba5afbb0e886b46"
username : "nadine"
email : "glen12@gmail.com"
password : "52b$184jyPepnj/dWKIXpTOSlHpuLZEH0aIcPoR/obNgEF/KmIZBR4jGwv"
__v : 0

_id: ObjectId('68b967bd99c26e1a22a2784c')
address : "0x914d586ca39fa652e4d6cf1e8bd8969961786a9f"
username : "pgt"
password : "52b$184SBcaD4neEsmo8s9XJCL3beXe1A4o8C10hoyYd4rCVd..3v0Kg5Zo6C"
__v : 0
```

## Agreement details

The screenshot shows the MongoDB Compass interface with the 'agreements' collection selected. The interface includes a header with tabs for 'Documents' (5), 'Aggregations', 'Schema', 'Indexes' (2), and 'Validation'. Below the header is a search bar with placeholder text 'Type a query: { field: 'value' } or [Generate query](#)'. There are buttons for 'Explain', 'Reset', and 'Find'. At the bottom are buttons for 'ADD DATA', 'EXPORT DATA', 'UPDATE', and 'DELETE'. The document list shows five agreements:

```
_id: ObjectId('68b96ab700c26e1a22a27857')
contractAddress : "0xbe585de157483ed3eac885d23b0018d5adefb67c"
depositor : "0xcf9e8dd99b7875dac4212eee6df16111965dc75e"
arbiter : "0xa42b6e8ba8868962c18dd7a51ba5afbb0e886b46"
beneficiary : "0xd8876f8b89896ff2e5a49f1845853ec4d3a238ed"
amount : "2"
token : "USDT"
tokenAddress : "0x787A697324db44AB965CS8CD33c13ff5eeA6295F"
status : "Created"
deadline : 2025-09-04T10:34:23.317+00:00
transactionHash : null
createdAt : 2025-09-04T10:32:23.318+00:00
__v : 0

_id: ObjectId('68b971a4dc7e95a36a355abe')
contractAddress : "0xa05969781aec19b2668ad8e77cb13df62628a82e"
depositor : "0x842b6e8ba8868962c18dd7a51ba5afbb0e886b46"
arbiter : "0xd8876f8b89896ff2e5a49f1845853ec4d3a238ed"
beneficiary : "0xcf9e8dd99b7875dac4212eee6df16111965dc75e"
amount : "2"
token : "USDT"
tokenAddress : "0x787A697324db44AB965CS8CD33c13ff5eeA6295F"
status : "Created"
deadline : 2025-09-04T10:34:23.317+00:00
transactionHash : null
createdAt : 2025-09-04T10:32:23.318+00:00
__v : 0
```

# DEPLOYMENT

## Frontend deployed on Vercel

The screenshot shows the Vercel dashboard for the project "wallet-frontend". At the top, there are tabs for "Repository", "Usage", "Domains", "Visit", and a dropdown. Below this, under "Production Deployment", there is a preview of the application interface with the title "ESCROW\_APP". To the right, detailed deployment information is provided:

- Deployment:** wallet-frontend-dkkfvn2zq-edric-coelhos-projects.vercel.app
- Domains:** wallet-frontend-theta.vercelapp.com
- Status:** Created
- Ready:** Sep 5 by EDRIC-1304
- Source:** main  
-o 8052740 changes

## Backend deployed on Render

The screenshot shows the Render dashboard for the project "wallet-backend". The left sidebar includes "Events", "Settings", "MONITOR", "Logs" (which is selected), and "Metrics". A modal window titled "Render MCP server" provides information about managing infrastructure directly from AI apps, with a "Learn more" link. The main panel displays the deployment details:

- WEB SERVICE:** wallet-backend
- Node** **Free** Upgrade your instance →
- Service ID:** srv-d2k3uiatl9vc73dsue2g
- EDRIC-1304 / wallet-backend** main
- <https://wallet-backend-quy1.onrender.com>

A notification at the bottom states: "Your free instance will spin down with inactivity, which can delay requests by 50 seconds or more." with a "Upgrade now" button. The logs section shows the following entries:

```
Sep 10 05:50:31 PM 91ch8 => Running 'yarn start'  
Sep 10 05:50:33 PM 91ch8 yarn run v1.22.22  
Sep 10 05:50:33 PM 91ch8 warning package.json: No license field
```

# Learning Outcomes

## Key Technical and Conceptual Insights



### Technical Learnings

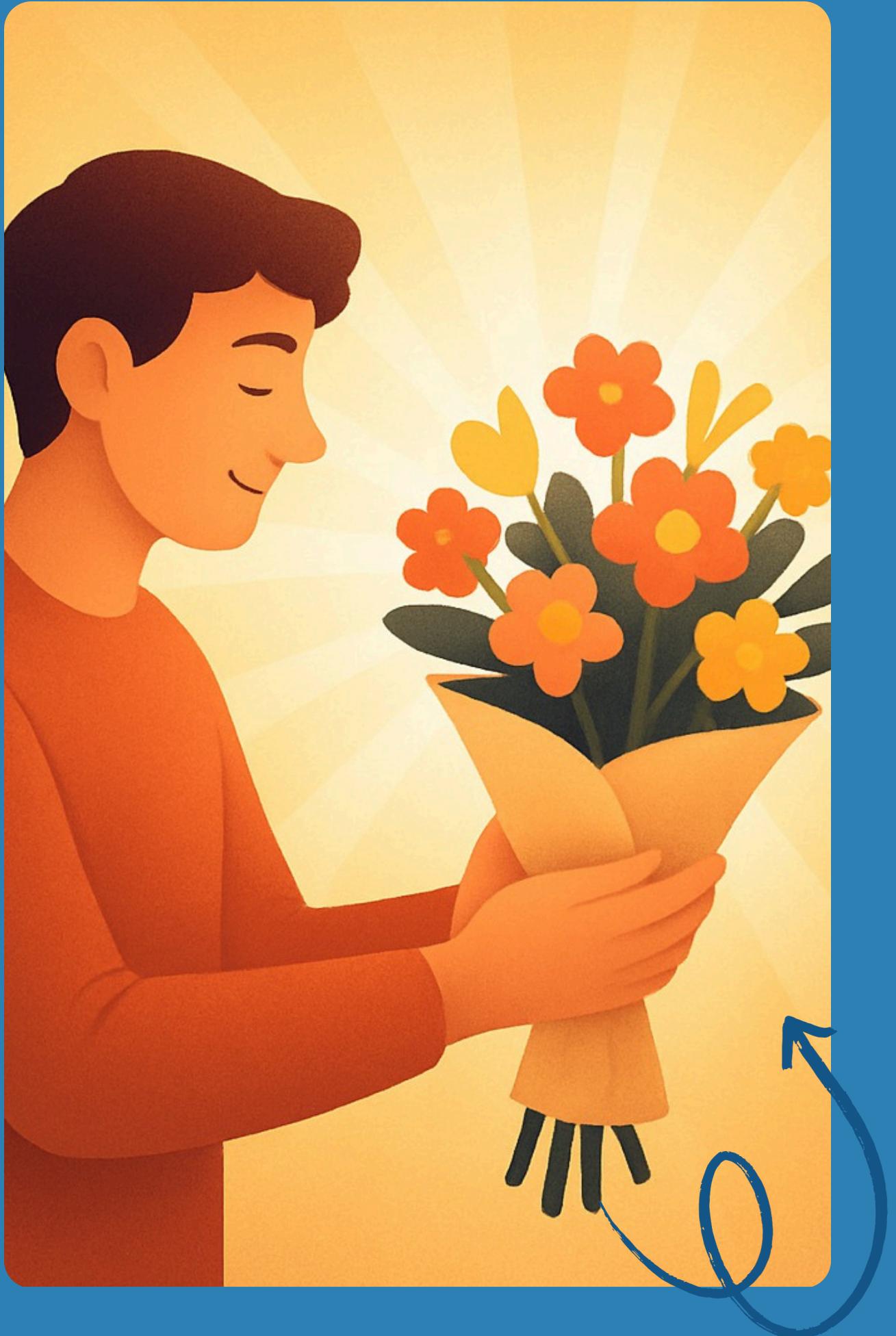
Gained proficiency in **Solidity smart contracts**, enabling effective blockchain interaction and backend development using Node.js, Express, and MongoDB for dynamic applications.

### Conceptual Learnings

Developed an understanding of **Web2+Web3 hybrid architectures**, mastering decentralized identity concepts and the significance of blockchain security and trust in modern software solutions.

### Decentralized Identity

Explored the implications of **decentralized identity systems**, focusing on secure data handling and user autonomy while integrating seamlessly with existing Web2 applications and infrastructures.



**THANK**  
**YOU**

Thank you for your time and attention.