# ANONYMIZED SOCIAL PROFILE FROM BLOCKCHAIN TRANSACTIONS

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COMPUTATIONAL SOCIAL SCIENCE

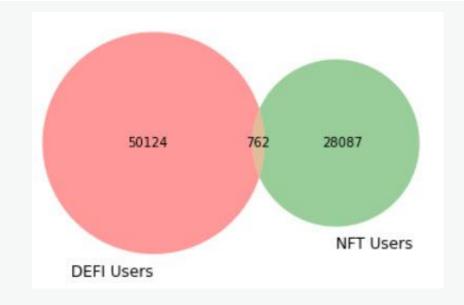
#### PROGRESS SO FAR

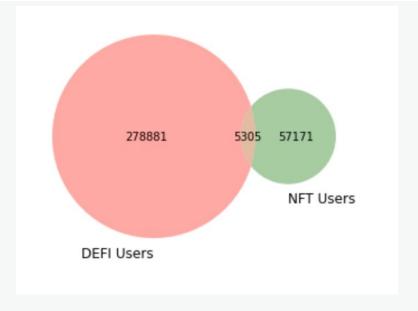
- COLLECTED DATA FOR TOP 100 DEFI SMART CONTRACTS AND TOP 6 NFT PLATFORMS
- COLLECTED USERS & THEIR TRANSACTION HISTORY FOR ALL THE PLATFORMS
- PERFORMED FEATURE EXTRACTION FOR EACH USER TO HELP PROFILE USERS (WITHOUT ML)
- CREATED A SCORING MECHANISM TO SEE HOW SIMILAR TWO USERS (WALLETS) ARE

### **COMPARATIVE ANALYSIS**

Label	Count
DeFi Unique Users	50124
NFT Unique Users	28087
Common Users	762
Total Unique Users	77449

Label	Count			
DEFI Unique Users	278881			
NFT Unique Users	57171			
Common Users	5305			
Total Unique Users	330747			





ETH BALANCE

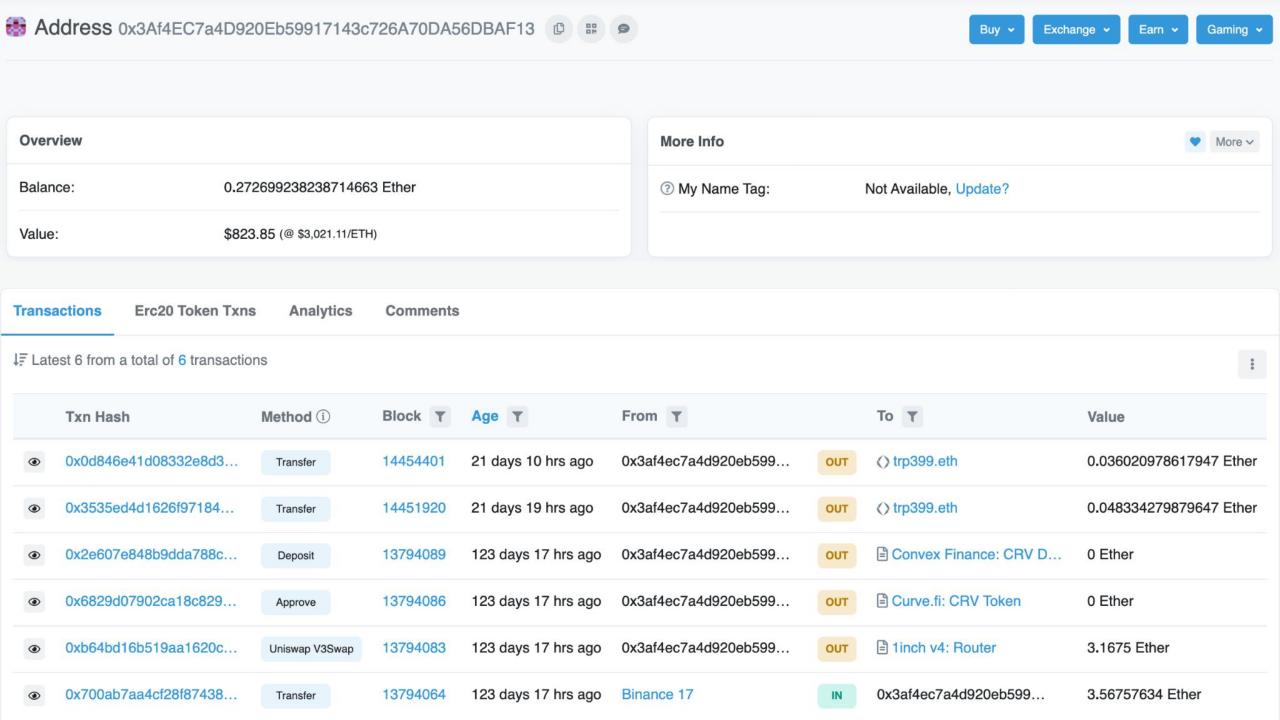
## PLATFORM COUNT

AVERAGE
TRANSACTIONS
PER DAY

**FEATURES** 

TOKEN
TRANSFERS

NFT TRANSFERS TRANSACTION COUNT



```
"0x3af4ec7a4d920eb59917143c726a70da56dbaf13":
    "Ether Balance": 0.27269923823871467,
    "Overall Transaction Count": 6,
    "Average Transactions Per Day": 3.0,
    "Platform Transaction Count": {
         "Curve Finance": 1,
         "Convex Finance": 1
    "Platform Average Transactions Per Day": {
         "Curve Finance": 0.5,
         "Convex Finance": 0.5
    },
    "User Counts": {
          "DEFI": {
              "User Count": 2,
              "Transaction Count": 3
         },
          "NFT": {
              "User Count": 0,
              "Transaction Count": 0
    "Other Platforms Count": {
          "0x1111111254fb6c44bac0bed2854e76f90643097d": 1
    },
    "Token Transfers": {
          "Curve DAO Token": {
               "buys": 1,
              "sells": 1
    "NFT Transfers": {}
```

- ETH BALANCE
- TRANSACTION COUNT & AVG TRANSACTIONS
- PLATFORM COUNTS & AVG PLATFORM TXNS
- USER COUNTS
- OTHER PLATFORM COUNTS
- TOKEN TRANSFERS
- NFT TRANSFERS



#### **TO COMPARE ANY 2 SCALAR FEATURES**

 $1 - \frac{\text{difference of values}}{\text{sum of values}}$ 



### WEIGHTS TO COMPARE ANY 2 VECTOR FEATURES

Sum of corresponding elements

Total of all elements in both vectors

```
weights = {
        "bal_score": 1,
        "trans_score": 2,
        "avg_trans_score": 4,
        "platform_trans_score": 6,
        "platform_avg_score": 8,
        "other_score": 1,
        "defi_user_score": 2,
        "defi_trans_score": 3,
        "nft_user_score": 2,
        "nft_trans_score": 3,
        "token_score": 4,
        "nft_platforms_score": 4,
```

```
"0x4ff59de3cb9aa738f09493838b84447e90b238c3 0x9ceed86bf15bf9c406ea88a2ed58478250b7d1f0": 96.67256395329608,
"0x00aef83b702b470cf5f316da538bb84baf29451e 0x5bf9c602edf9b370cb89f648358788031270c3fc": 96.36508251746167,
"0x00aef83b702b470cf5f316da538bb84baf29451e 0x8ee9b4bb42c147dbc387fc742bdf8d84021b71c2": 95.79318218876355,
"0x00aef83b702b470cf5f316da538bb84baf29451e_0x3bf89ac115a8eba0b690de557292caed242145f3": 90.88969542951823,
"0xb5dabadde14273010da7215e3ba535fc353711d6 0x12e06a1fdc0c23a86d918e2f440db38eaf838587": 90.0,
"0xebbeab519cb0499a9bb68df974104132e76f29c4_0x01927bbe8f6cf676068bc70a3a48a69db6b4a15b": 90.0,
"0xebbeab519cb0499a9bb68df974104132e76f29c4_0x7f4c8360f3f910c6a5776521f2164d6b0958f1cb": 90.0,
"0xebbeab519cb0499a9bb68df974104132e76f29c4_0x8600ec62ac36a119fe7a59b3ecc2e77209c6066f": 90.0,
"0x24886e22e9b12c00741d614fccd26dec1119c025_0x659673cecb02e097a9ede297525c4b515cccf5a0": 90.0,
"0xf1ed6955acb24440b301299ccd9468c66acc29b8 0xc03ddfd9a891f16619710a6caf41beb7b56324be": 90.0,
"0xb342a461caec02a1db81965443dbcb026a0a15d7 0x3f1fd64b328284f4a34abf477e2f918cd3f891cc": 90.0,
"0xb342a461caec02a1db81965443dbcb026a0a15d7_0xe4fc000a901e8929652725631f04d360192899ba": 90.0,
"0xb342a461caec02a1db81965443dbcb026a0a15d7_0x9f16378c73efe28e114c8339234bfde720153739": 90.0,
"0xb342a461caec02a1db81965443dbcb026a0a15d7 0x346f1974c8347c6a00923504774f028c3c12a3fc": 90.0,
"0xb342a461caec02a1db81965443dbcb026a0a15d7_0x2745c3b42e32e8dfbf663acf513fe20949697743": 90.0,
"0xb342a461caec02a1db81965443dbcb026a0a15d7 0x6fa475a4cf96ebf38098af4859832b68ae2cd373": 90.0,
"0xebbeab519cb0499a9bb68df974104132e76f29c4_0x1eb412aec541ba3571fc1db9971a76d1d62e929a": 89.99927074724098,
"0x5ef34744e60abbe711a398a589562dcf1241f782_0x519d8c535379c2faef246cd68390962641ed0370": 89.99599720116451,
"0x17cf0fd5012e60c03611d9dad812895778854932 0x6fdc93669f6784d834c3fec1e632dd00e11c5a6f": 89.99494901899845,
"0xe0c0f02b65b37bf153b1f518e33c2d9f3f5a7dd5 0xedcca9b921367ff480dabbb267df530b3684aaa3": 89.99449536381607,
"0x5ef34744e60abbe711a398a589562dcf1241f782_0x1d431d0ba3db526eaedfbb055a7e84ea061bd799": 89.9920197662793,
"0xe41b49c314d88a3b6b0264efc8959e98f9a1dd61 0x743835e7d12af1e76a3bcd4b7ccd0c0c03e2769e": 89.98522049643228,
"0x55f3a0abf08f71285ce11b8bcb7007d78cdfb386 0x97cf4e7b149c9ce09826daeec1c576504aa4bfaf": 89.9799101971243,
"0x5ef34744e60abbe711a398a589562dcf1241f782_0x22bbfb5aaf44447a3eb15c0d9185c46f4fbc555e": 89.97854663918974,
"0x1e873bb29b67841e3c82316b54678ce0bf697f98_0x9b867a540f599b25ec513e1401a57bb423e5176f": 89.9763825859797,
"0x78a1ed1ac1e2f08a797328b161161a65e0ab85d5_0xccf0dac5ac4844f6b71803b2a4d99b844fe5c4da": 89.97275460591862,
"0x20f5c5b87f4412353fd659b7b63a0f46d63c2993 0x3bdc2c4fd687cfa0b860ea49b126b2aef7015cf6": 89.96412408964443,
"0x2a971edbf4ca85a661bda6c648b70178c306efa6 0xf6d7924fc8521f97dd2fa34f64f21477bfd84e4b": 89.95903091782407,
"0x55f3a0abf08f71285ce11b8bcb7007d78cdfb386 0x365f1b63a3a4156016340617df0b9d1f03d39127": 89.9553610562238,
"0x78a1ed1ac1e2f08a797328b161161a65e0ab85d5 0xac06da6e0b6da605da0d6c4ea33ca3e83218c123": 89.95237428053767,
```

#### REPEATED TRANSACTIONS?

•	0x07667cdffa9552d0ace	Cast Vote	14330731	40 days 17 hrs ago	0x4ff59de3cb9aa738f09	OUT	🖺 Uniswap: Governor Bravo	0 Ether	0.001437408
•	0x30a450969630375fed	Delegate	14308630	44 days 4 hrs ago	0x4ff59de3cb9aa738f09	ОИТ	Uniswap Protocol: UNI to	0 Ether	0.006222905
•	0x76dd8deae830e23efa	Cast Vote	14330736	40 days 17 hrs ago	0x9ceed86bf15bf9c406e	OUT	🖹 Uniswap: Governor Bravo	0 Ether	0.001437408
•	0xc748dc90d2658245dc	Delegate	14308655	44 days 4 hrs ago	0x9ceed86bf15bf9c406e	OUT	Uniswap Protocol: UNI to	0 Ether	0.006222905
•	0xe7f2942ab425d761fe3	Redeem	14402844	29 days 12 hrs ago	0x27f902258f3083b47dd	OUT	■ 0x8c7e68e7706842bfc7	0 Ether	0.0023400137
•	0x934354fa2b405813b1	Delegate	14325393	41 days 14 hrs ago	0x27f902258f3083b47dd	OUT	Uniswap Protocol: UNI to	0 Ether	0.0008824519
•	0xfd0ee5d3b218338462	Cast Vote	14325377	41 days 14 hrs ago	0x27f902258f3083b47dd	OUT	🖹 Uniswap: Governor Bravo	0 Ether	0.0023128649
•	0x728a6013378aa56152	Delegate	14282719	48 days 4 hrs ago	0x27f902258f3083b47dd	OUT	Uniswap Protocol: UNI to	0 Ether	0.0055429932
•	0x33861339d9f1606f2bd	Redeem	14402860	29 days 12 hrs ago	0xd233df54cbe2c7f1cf01	OUT	■ 0x8c7e68e7706842bfc7	0 Ether	0.001990007
•	0xde0ac4eff6022dafa5a	Cast Vote	14325450	41 days 13 hrs ago	0xd233df54cbe2c7f1cf01	OUT	🖹 Uniswap: Governor Bravo	0 Ether	0.00181837€
•	0xc1827ba2f132ddabe2	Delegate	14325446	41 days 13 hrs ago	0xd233df54cbe2c7f1cf01	OUT	🖹 Uniswap Protocol: UNI to	0 Ether	0.000717005
•	0x15c4d5f36673cb3462	Delegate	14282829	48 days 4 hrs ago	0xd233df54cbe2c7f1cf01	OUT	Uniswap Protocol: UNI to	0 Ether	0.003302360

#### **SIMILAR TOKENS AND NFTS?**

•	0xe7f2942ab425d761fe3	29 days 12 hrs ago	Null Address: 0x000000	IN	0x27f902258f3083b47dd	22820371262191	Voltz Genes (VOLTZU)	si	View NFT
•	0x33861339d9f1606f2bd	29 days 12 hrs ago	Null Address: 0x000000	IN	0xd233df54cbe2c7f1cf01	12000448547726	Voltz Genes (VOLTZU)	Si	View NFT
•	0xfdbed8698fc13d2566c	29 days 10 hrs ago	Null Address: 0x000000	IN	0x4ff59de3cb9aa738f09	45648770761234	Voltz Gene (VOLTZU)	esi	View NFT
•	0x2e839e6b8067d6df34	26 days 19 hrs ago	Null Address: 0x000000	IN	0x9ceed86bf15bf9c406e	89592899059056	Voltz Genes (VOLTZU)	si	View NFT
•	0xca72f89a6f80ce7e497	44 days 6 hrs a	go 🖺 Disperse.app	)	0x4ff59de3cb9aa	738f09	1.16	Uniswap (U	NI)
•	0xca72f89a6f80ce7e497	44 days 6 hrs a	go 🖺 Disperse.app	)	0x9ceed86bf15bf	f9c406e	1.16	Uniswap (U	NI)
•	0x0d4cd564f9b825e29c	. 48 days 4 hrs a	go () tiantai.eth		IN 0x27f902258f3083b	947dd	0.1	Uniswap (UN	11)
•	0xca9f223d4c807c365ca	48 days 4 hrs a	go () tiantai.eth		IN 0xd233df54cbe2c7f	1cf01	0.1	Uniswap (UN	<b>II</b> )

## **DIVING DEEPER**

0x1ac	5f2fabfc67c11c8d0	14319546	42 days 11 hrs ago		Disperse.a	□ Disperse.app     →		0x4ff59de3cb9aa738f09		0.005 Ether	
0x85c	0x85ca6c081862795018 14308505 44 days 4 hrs ago		☐ Disperse.app		→ 0x4	0x4ff59de3cb9aa738f09		0.0075 Ether			
0x1ac	0x1ac5f2fabfc67c11c8d0 14319546 42 days 11 hrs ago		Disperse.app		→ 0x9	0x9ceed86bf15bf9c406e		0.005 Ether			
0x85ca6c081862795018 14308505 44 days 4 hrs ago		Disperse.app		→ 0x9	ceed86bf15	bf9c406e	0.0075 Ether				
0x83611754b7f6151000 13820010 119 days 18 hrs ago		Aztec: Private Rollup Bri			→ 0x27f902258f3083b47dd		0.1247 Ether				
•	0xc0b3d93902cc898871	Tran	sfer	14282718	48 days 4 hrs ago	FTX Exchange 2	2	IN	0x27f902258f3083b47dd	0.014 Ether	0.0012639439
•	0xa50225cb969dd7efb2	Tran	sfer	13834283	117 days 13 hrs ago	0x27f902258f308	83b47dd	ОПТ	0xd233df54cbe2c7f1cf01	0.005 Ether	0.0007145910
•	0x6f1ceab3fb98e109338	B Depos	sit Pending	13821885	119 days 11 hrs ago	0x27f902258f308	83b47dd	OUT	Aztec: Private Rollup Bri	0.1153 Ether	0.0029829548
•	0xb614bdc0936cbf2de	b Dep	osit Pending	13834307	117 days 13 hrs ago	0xd233df54cbe2	2c7f1cf01	OUT	Aztec: Private Rollup Bri	0.01134 Ether	0.002531040
•	0xa50225cb969dd7efb	02 Tra	ansfer	13834283	117 days 14 hrs ago	0x27f902258f30	83b47dd	. IN	0xd233df54cbe2c7f1cf01	0.005 Ether	0.00071459
•	0xec979d3d02498453b	DC Tra	ansfer	13833932	117 days 15 hrs ago	0x52323f07c0b7	7b479b6	IN	0xd233df54cbe2c7f1cf01	0.01002 Ether	0.000856118



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## Scalable Privacy on Ethereum

Layer 2 for the internet of money

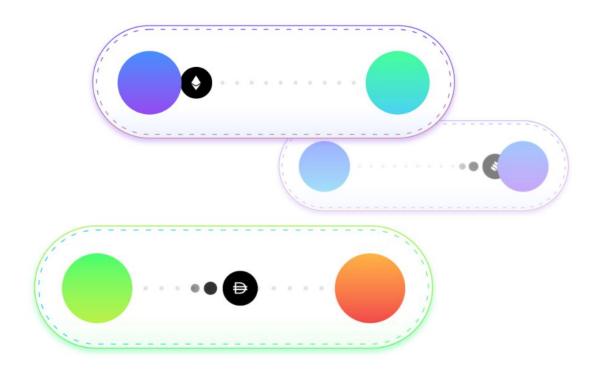
**DEVELOPERS** 

ZK.MONEY



#### **Privacy Guarantee**

The new internet of money is secured by openness, but at a high price — all your counterparties know your entire financial history. Aztec is the ultimate security shield for the internet of money, protecting user and business data on Web3.0.





#### **Identity Privacy**

With cryptographic anonymity, sender and recipient identities are hidden



#### **Balance Privacy**

Transaction amounts are encrypted, making your crypto balances private



#### **Code Privacy**

Network observers can't even see which asset or service a transaction belongs to

#### WIKIPEDIA MUCH?

- MULTIPLE WALLET ADDRESSES -> PARENT AND CHILD ACCOUNTS
- BAN EVASION IS JUST AS EASY
- FEATURES AND ATTRIBUTES
- MISBEHAVIOUR HAS HUGE IMPACT



**UNI Token Airdrop** 





+

Q Search

Spaces ▼

器 All ▼

6.3K space(s)



**ENS** 

51K members

Join



Gitcoin

38K members

Join



Aave

34K members

Join



**Arbitrum Odyssey** 

16K members

Join



Sushi

28K members

Join



Uniswap

27K members

Join



**OlympusDAO** 

18K members

Join



PancakeSwap

34K members

Join



## OPEN TO QUESTIONS

**THANK YOU**