

https://github.com/diegoddie/Start2Impact_FinalProject



START2IMPACT - BLOCKCHAIN DEVELOPMENT FINAL PROJECT 🚀

"GREENSTEPBIDS"

DIEGO LAURICELLA

Deployed at

<https://web-production-bbee.up.railway.app/>



OVERVIEW

Welcome to GreenStepBids, a Django project for an online auction application, allowing users to participate in auctions and place bids on eco-friendly and sustainable sneakers.

At the end of each auction, an automated process generates a JSON file containing comprehensive auction details, including the winning bidder's information.

This JSON data is then hashed and securely transmitted to the Sepolia blockchain through a transaction.

TECH STACK

- ***Django***
- ***CSS/Bootstrap***
- ***PostgreSQL***
- ***Javascript***
- ***Redis***
- ***Celery***
- ***Web3.py***
- ***Git***

FEATURES

- **LANDING PAGE**

GREEN STEP BIDS  

Bid Green, Leave a Sneaker Footprint

SIGN UP

LOGIN

Welcome to GreenStepBids!

Our mission is to promote sustainable fashion by connecting sneakerheads with eco-friendly footwear auctions.

At the end of each auction, a JSON file containing all auction details and winner references will be hashed and broadcasted on the Ethereum blockchain (Ropsten) for transparency, security and immutability.

SIGN UP

LOGIN



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- ***SIGN UP / LOGIN PAGE (W/ RESET PASSWORD FUNCTIONALITIES)***

Register

Username:

Email:

Password:

Repeat Password:

Login

Username:

Password:

Forgot password? [Reset Password](#)

Password reset

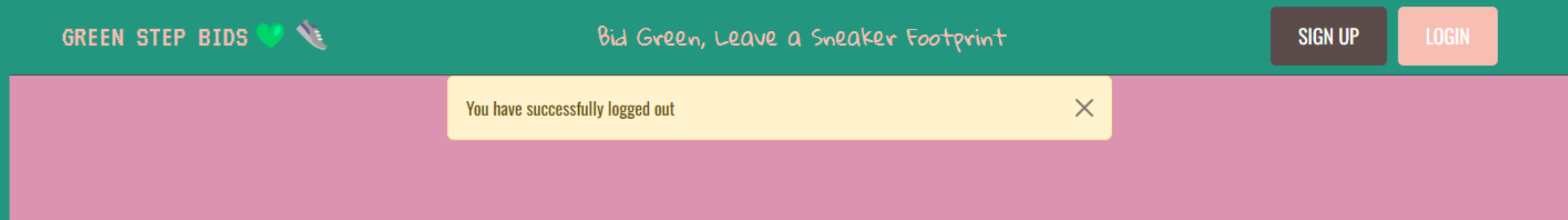
Forgotten your password? Enter your email address below, and we'll email instructions for setting a new one.

Email:

- **NAVBAR**



- **DJANGO MESSAGES**



- **OTHER GRAPHICS ELEMENTS (LOADING SPINNERS, ETC.)**

- ***AUCTIONS PAGE***

The "Auctions" page is the focal point of the entire app, presenting a collection of auction cards. These cards correspond to individual **auction** instances, each created using Django's admin panel and stored in the SQLite database.

Bids are managed through a dedicated model and stored in Redis. The platform features convenient filtering buttons that enable users to sort auctions based on their duration, enhancing user engagement and accessibility.



Auctions

The 'View Auction' button is enabled only when the auction is ongoing

ALL AUCTIONS

IN PROGRESS

UPCOMING

EXPIRED

Filter by auction expiration



Nike GreenStride

Bid on this auction for a pair of Nike GreenStride Retro sneakers.

Starting from: \$ 100.00

VIEW AUCTION



Nike RenewEarth

Bid on this auction for a pair of Nike RenewEarth Trail.

Starting from: \$ 90.00

8d 15h 33m 47s



Nike SolarShift

Bid on this auction for a pair of Nike SolarShift Run sneakers.

Highest Bid: \$ 150 (you)

VIEW AUCTION



Nike RenewFusion

Ethereum Transaction:
[0x988f842177...d06794](#)

Final Price: \$ 150.00

AUCTION ENDED


Countdown to the start of the auction

Link to the Sepolia explorer to view the tx when the auction is expired

- **AUCTION DETAILS**

← BACK

- 7d 15h 16m 57s



NIKE SOLARSHIFT AUCTION

Bid on this auction for a pair of Nike SolarShift Run sneakers.

ID: 6

STARTED: Aug 27, 2023 07:52:33

DEADLINE: Sep 04, 2023 07:52:38

INITIAL PRICE: \$ 150.00

HIGHEST BID: \$ 150 (you)

ENTER YOUR BID:

150

MAKE A BID

Countdown to the end of the auction

Auction details

See if you are winning the auction

If you place a bid within the last 15 minutes of the auction, an additional 15 minutes will be automatically added.

- **"MY AUCTIONS" PAGE**


My Auctions

See the auctions you've won or those where you've placed at least one bid.

ALL AUCTIONS

IN PROGRESS

WON




Nike RenewFusion

Ethereum Transaction:
[0x988f842177...d06794](#)

Final Price: \$ 150.00

AUCTION ENDED




Nike SolarShift

Bid on this auction for a pair of Nike SolarShift Run sneakers.

Highest Bid: \$ 150 (you)

VIEW AUCTION



Nike OceanVenture

Ethereum Transaction:
[0x7524072c20...084a4e](#)

Final Price: \$ 120.00

AUCTION ENDED

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WHAT HAPPENS WHEN AN AUCTION ENDS?

HERE COMES CELERY INTO PLAY.

When an auction expires, three Celery workers come into play. These workers are scheduled to listen to events every minute, such as the end of an auction.

The first worker is responsible for fetching the highest bid and the winner from the Redis cache for that particular auction and then saving them in the database.





The second worker handles auctions that have concluded but have not yet been broadcasted to the Sepolia blockchain.

It creates a JSON containing the auction data, hashes it, writes the transaction to the Sepolia blockchain and saves the tx hash to the database

*The third worker activates when it detects a new Ethereum transaction has been broadcasted. In this case, to manage memory efficiently, it proceeds to clear the Redis cache (**remember, Auctions are stored in the SQLite DB and Bids are stored in Redis!**) for the corresponding auction, preventing unnecessary memory consumption.*



START2IMPACT

*This was my final Start2Impact Blockchain Development Project. I enjoyed this Master and wow.. **what a journey has been!** From not knowing even what VSCode was to build such a complex project.*

I'm proud of myself!

THANK YOU! 

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