

# CS4530 Final Project: “Art Auction House”

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Github: <https://github.com/neu-cs4530/covey-town-project-group-406>

Deployed: <https://coveytown.onrender.com/>

## Our feature

We noticed that art exists in Covey.Town but there is no way for users to interact with the art, which is why we decided to create an Art Auction House. With our feature, users can view and learn about real artwork from the Metropolitan Museum of Art while simultaneously being able to buy and sell art in order to curate artwork collections and make money!

Each user starts with \$1,000,000 when they first sign up, and can join any auction floor in the auction house as an observer or bidder. Once the auction is in progress, bidding starts and users can bid on the artwork. The user that placed the highest bid when the time runs out, wins and the artwork is added to the winner’s inventory. Users can also put their artwork up for auction and choose the starting bid price. The inventory can be viewed from anywhere in Covey.town from the sidebar where users can log in/out and view their account information.

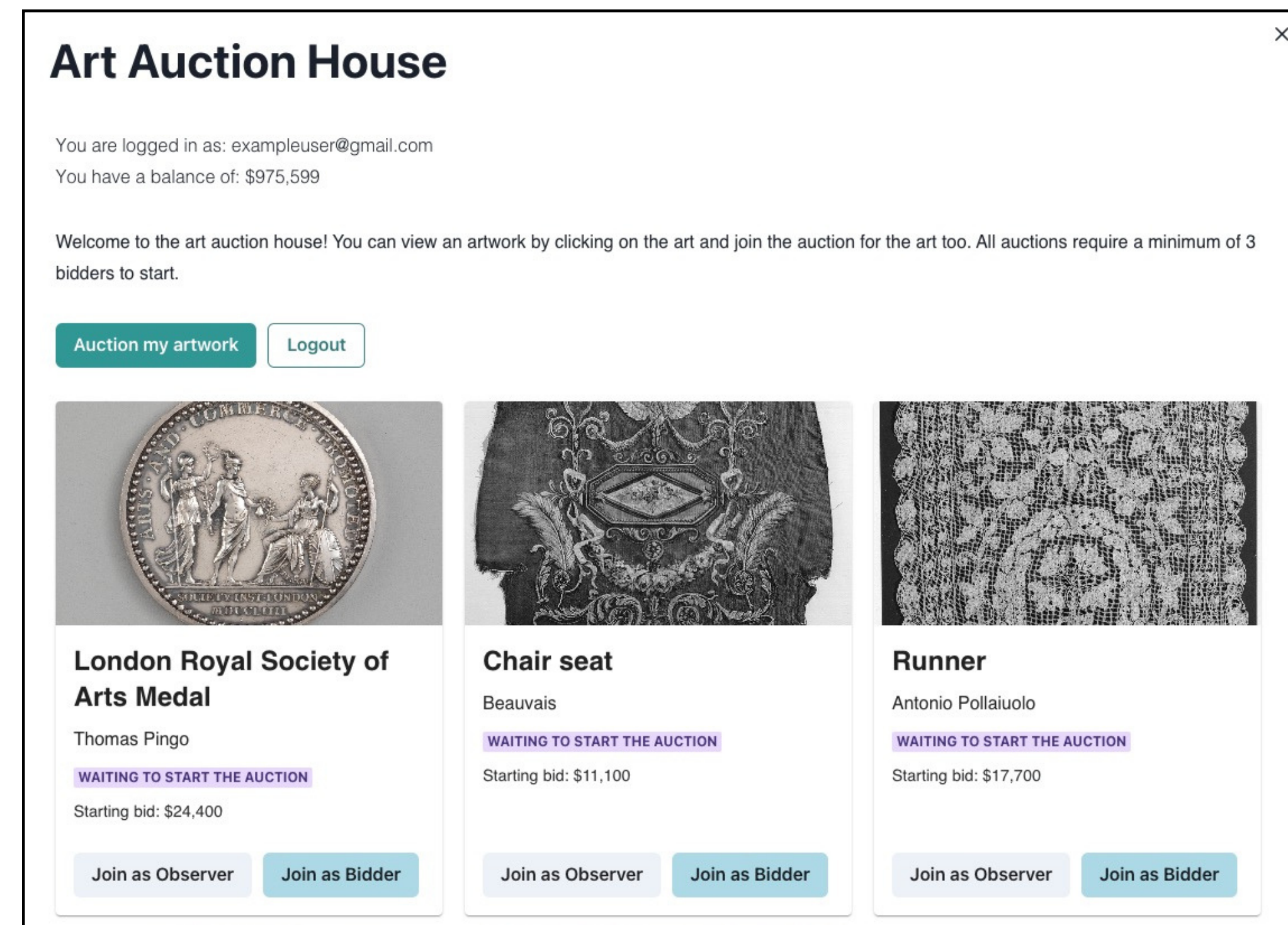
## Our tech stack and design

We implemented the art auction house feature using the existing Covey.town codebase. When a player enters an art auction house area, a modal pops up (using React and Chakra-UI) where the user can interact with our feature. The auction floors and bidding functionality are both tracked by the backend models we implemented and synced to the frontend using socket-io.

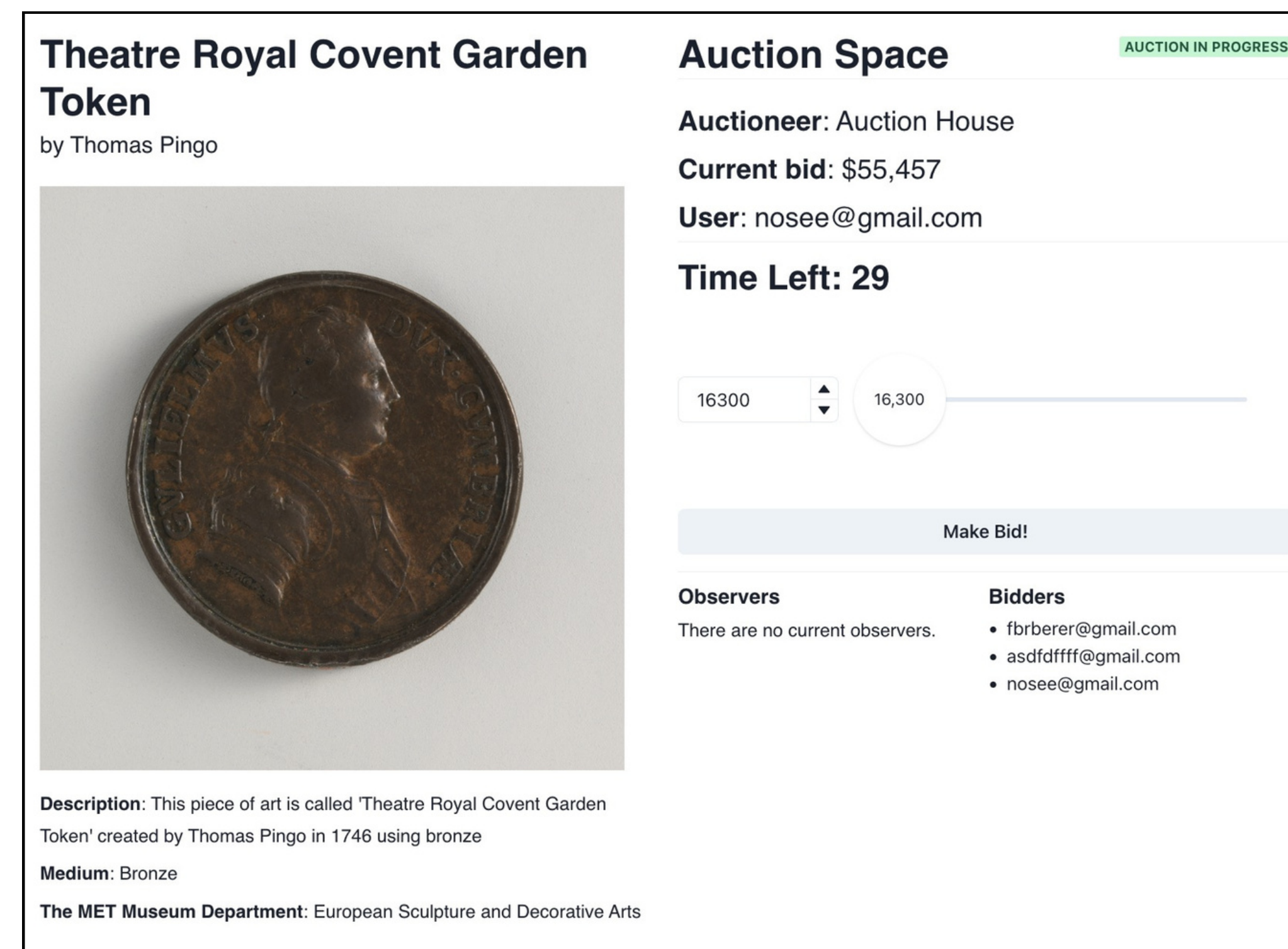
In addition, we have API calls to the MET API to get real artwork data, a firesore database to keep persistent artwork information, and a singleton pattern Data Access Object (DAO) to handle read and write operations to the database. Furthermore, we set up a continuous integration pipeline which runs automated tests and deploys the site using Heroku and Onrender.

## Future work

Some of the functionality we would like to implement in the future includes: a real time leaderboard which displays the wealthiest art owners of Covey.town, the ability for a user to sell their artwork back directly to the auction house in addition to putting it up for auction, and the ability to reset password your art auction account password. We also thought, it would be really interesting to abstract the auction house area so that we can allow for other types of auction houses (not limited to art).



Art auction house when user is logged in which shows three bidding floors.



Auction floor where the user has joined as a bidder and the auction is in progress.