

An abstract graphic on the left side of the image, consisting of a network of white and light blue lines and circles, resembling a circuit board or a digital tree structure, set against a blue gradient background.

# PIECES OF ALDERAAN

## AN NFT MINTING PROJECT



# PROJECT TEAM MEMBERS:

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## *Mos Eisley Market*

*The Planet Alderaan was a center during the Old Republic and home to nobility. It was destroyed with a giant space laser by the Empire.*

*Now you can own a piece of galactic history by purchasing your own piece of Alderaan as an NFT...*

# PIECES OF ALDERAAN

CREATING AN NFT COLLECTIBLE



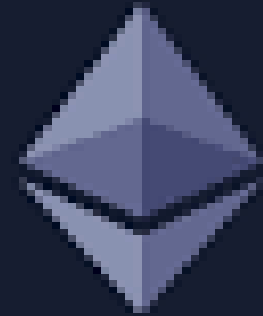
BITCOIN INTRODUCED 2009

Introduction of  
blockchain technology  
to the public



ETHEREUM INTRODUCED 2014

Smart Contracts written  
on a Blockchain



ethereum



# MEMES ON THE BLOCKCHAIN

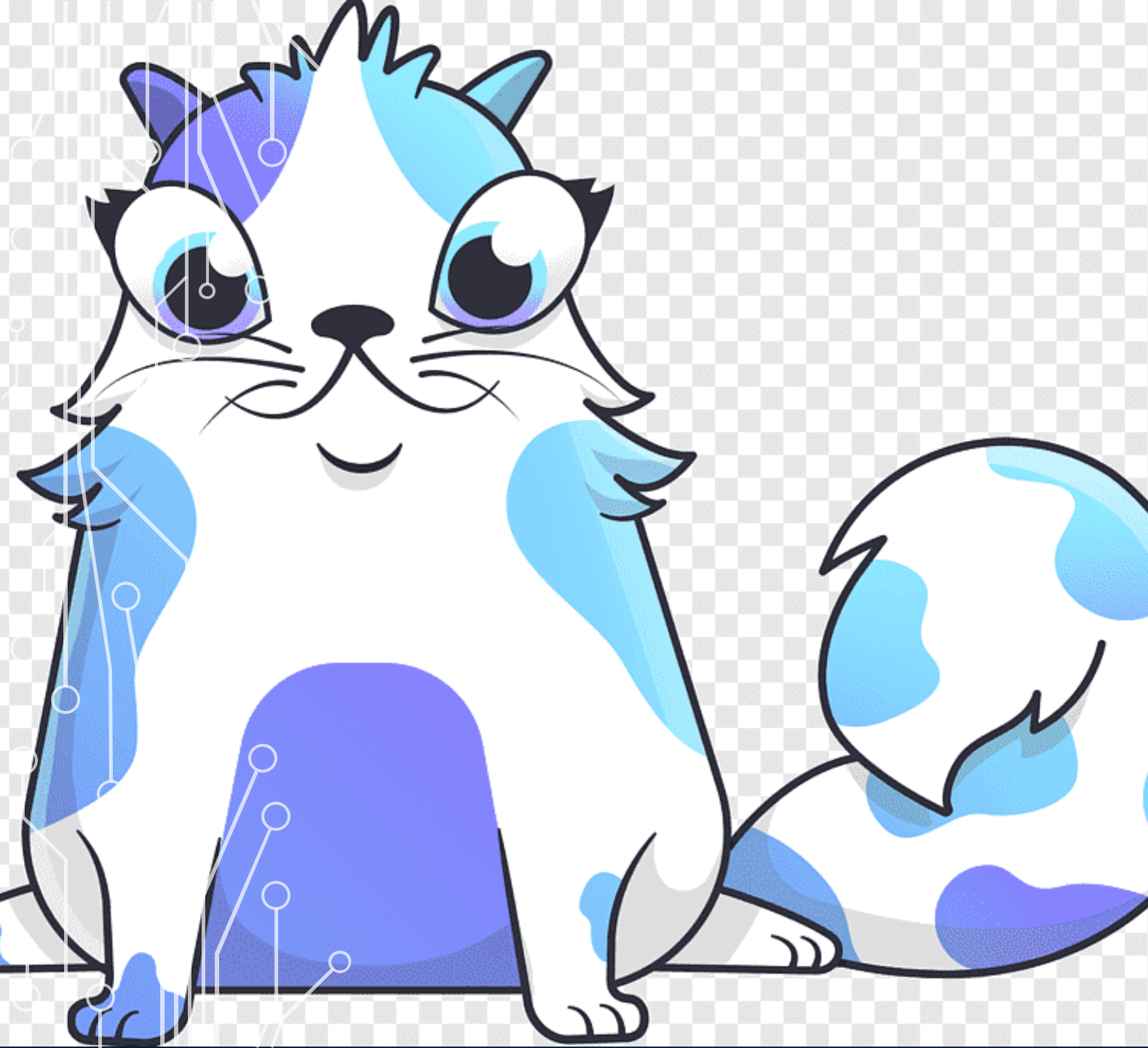
Rare Pepes as NFTs  
are popular trading  
items on the  
Blockchain





# CRYPTOPUNKS 2017

RANDOMIZATION OF IMAGES BECOMES POPULAR



# CRYPTOKITTIES GO VIRAL

- ERC721 contract standard for NFTs is introduced
- In 2021 NFTs exploded into public consciousness.





## OPENSEA IS LARGEST NFT EXCHANGE

- Capitalized at \$1.5 billion which as a startup means it is considered a “unicorn.”
- Among prominent OpenSea investors is Mark Cuban, the Dallas based entrepreneur known as one of the “sharks” on the *Shark Tank* TV show.



# PIECES OF ALDERAAN

SINCE MARKETABILITY FOR NFTS IS KEY, WE DECIDED TO TARGET A POPULAR SUB- CULTURE WITH A HISTORY OF ENJOYING COLLECTIBLES.

THAT IS WHY WE BASED OUR NFTS ON THE FICTIONAL PLANET OF ALDERAAN FROM A SCIENCE FICTION FILM SERIES. IN THE SERIES, ALDERAAN IS DESTROYED BY A GIANT SPACE LASER.

MUCH AS PEOPLE NOW COLLECT PIECES OF THE FALLEN BERLIN WALL, AS A HISTORICAL ARTIFACT, WE THOUGHT IT WOULD BE ENTERTAINING TO COLLECT PIECES OF THE DESTROYED PLANET - WHICH WOULD NOW BE PLANETOIDS CIRCLING IN SPACE.



## MosEisleyMarket

Welcome to the open marketplace of pieces of the Planet Alderaan. This is your chance to own a piece of the Planet Alderaan that was the center of the Old Republic home to Nobility. It was destroyed by the Empire's terrible space weapon.

BID

Planetoid name...

Image:  No file chosen

Pinata API Key

Pinata Secret API Key

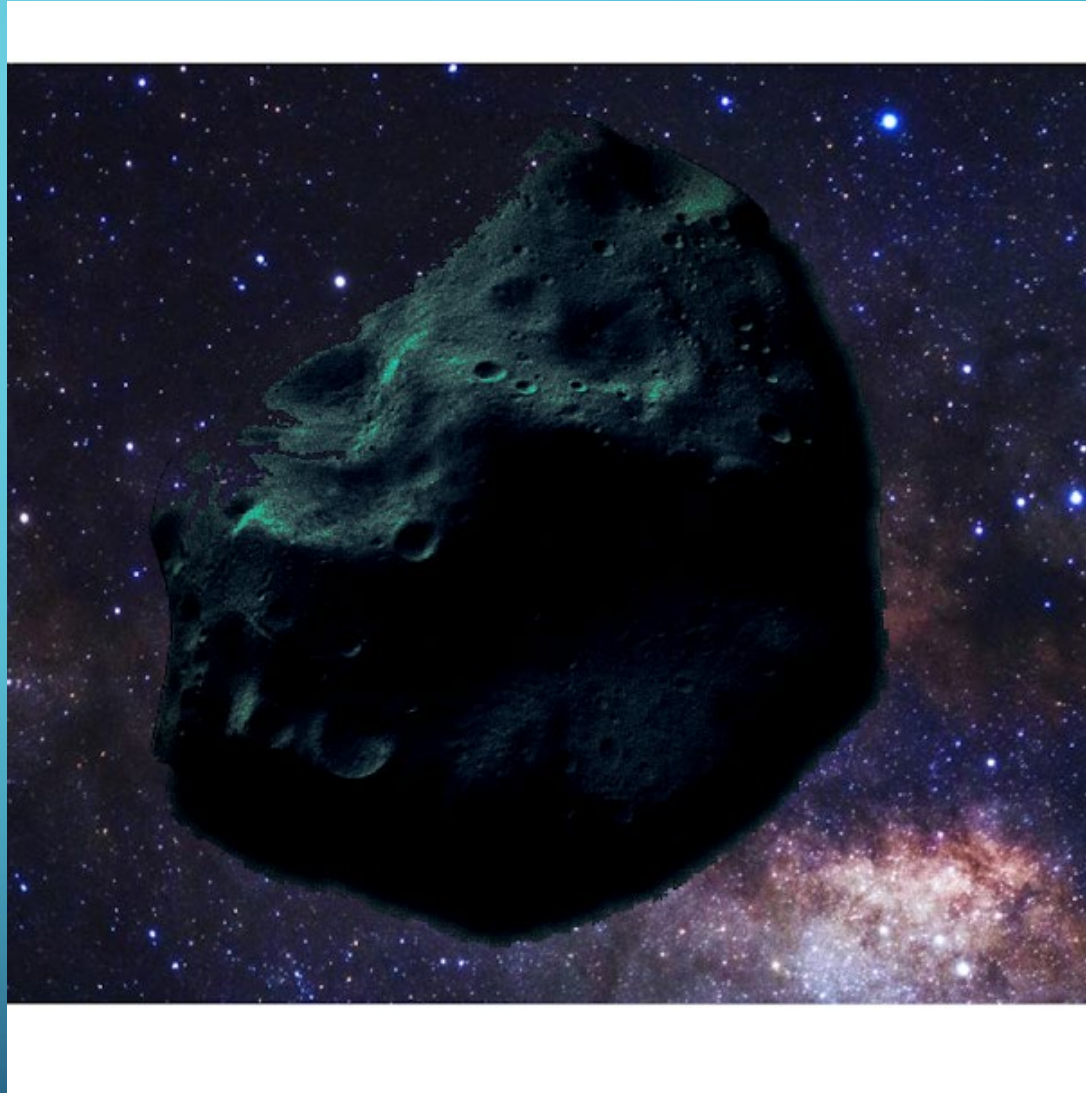
Note: Pinata requests are done locally via your browser. Your keys are not shared with any party except Pinata.

## LOCAL HOST VERSION REMIX

- We were able to write Solidity code in ReMix and have an NFT minted to a local host.
- But we wanted to write code to deploy to OpenSea testnet

## DESIGNING OUR PLANETOIDS

We created a limited series of images and uploaded them to the Interplanetary Filing System (IPFS), using the Infura Ethereum API.







# USING BROWNIE WITH SOLIDITY AND PYTHON

## PART1

THEN, WE WROTE A SOLIDITY CONTRACT, AND TWO PYTHON SCRIPTS THAT WOULD BE USED TO DEPLOY AND GENERATE THE NFTS TO OPENSEA TESTNET. WE DECIDED TO USE THE TESTNET TO AVOID THE HIGH COST OF ACTUAL ETHEREUM. WE USED RINKEBY TEST NET ETH.

WE WROTE THE THREE CONTRACTS USING VISUAL STUDIO (VS) SINCE IT ALLOWS FOR BOTH SOLIDITY AND PYTHON. WE HAD TO UPLOAD SEVERAL EXTENSIONS INTO VS TO ALLOW US TO WRITE IN SOLIDITY, THE LANGUAGE OF ETHEREUM CONTRACTS. THE SOLIDITY CODE WAS A CONTRACT BASED ON THE ERC721 PROTOCOL. THE FIRST PYTHON SCRIPT WAS DESIGNED TO COMPILE AND DEPLOY THE SMART CONTRACT, AND THE SECOND WAS TO HAVE THE CONTRACT MINT THE NFT TO OPENSEA.



## USING BROWNIE WITH SOLIDITY AND PYTHON PART 2

THEN WE HAD TO LOAD A SOFTWARE CALLED BROWNIE, WHICH ALLOWS SOLIDITY FILES TO INTERACT WITH PYTHON FILES. THEY WOULD ALL BE LAUNCHED THROUGH BROWNIE COMMANDS IN A TERMINAL.

AT FIRST WE WERE VERY FRUSTRATED AS WE HAD GREAT TROUBLE GETTING BROWNIE TO MAKE THE SOLIDITY CONTRACT DEPLOY USING THE PYTHON SCRIPT. THERE IS NOT MUCH HELP ONLINE FOR USING BROWNIE AS THE WHOLE NFT FIELD IS FAIRLY RECENT.



## USING BROWNIE WITH SOLIDITY AND PYTHON PART 3

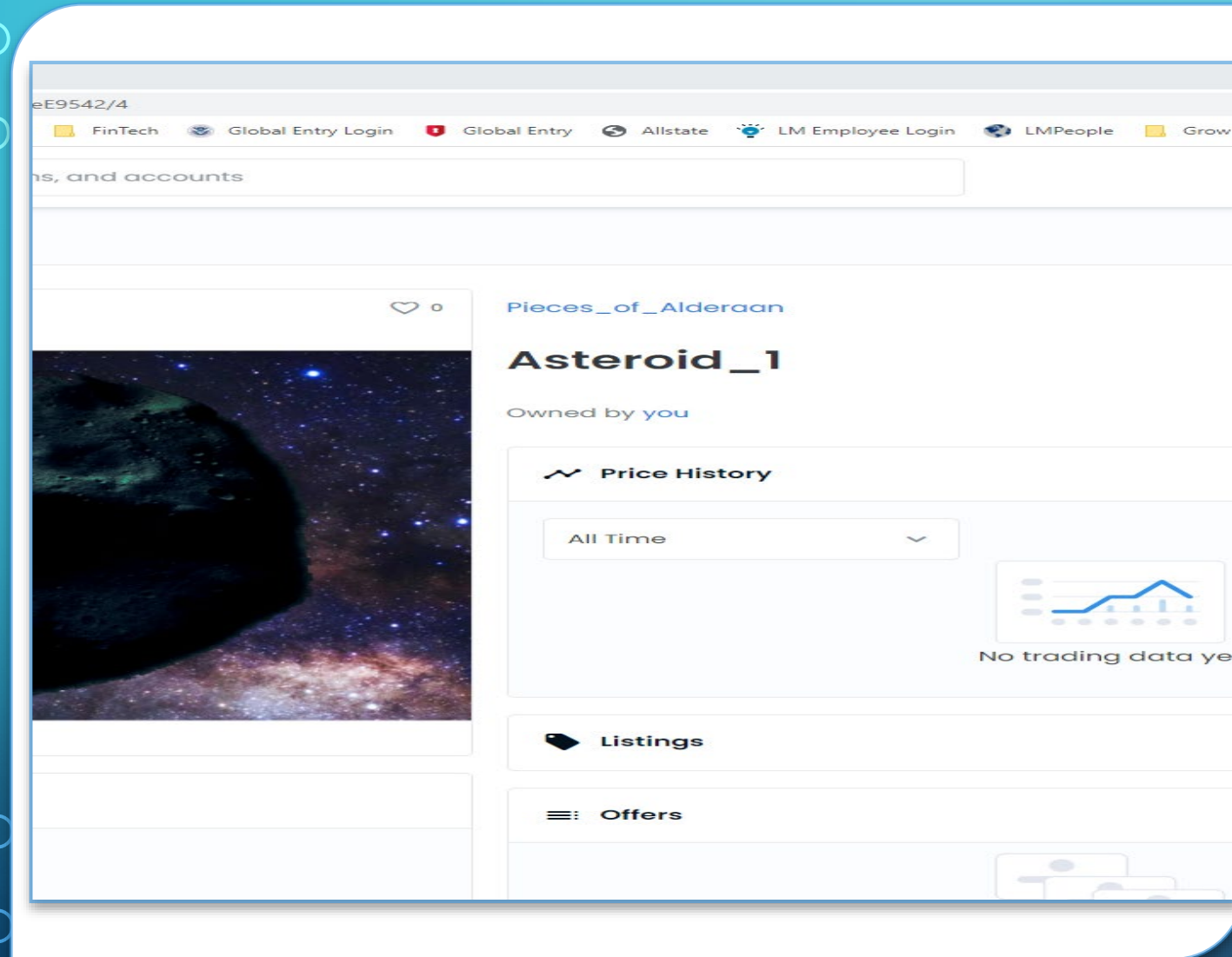
EVENTUALLY WE REALIZED THAT BROWNIE NEEDS TO BE FIRST INITIALIZED, WHICH CREATES FOLDERS AND A FILE TREE, THAT BROWNIE USES TO INTERFACE SOLIDITY WITH PYTHON. AFTER WE INITIALIZED BROWNIE, WE THEN HAD TO MAKE SURE OUR CONTRACT SOLIDITY FILES AND OUR PYTHON SCRIPTS WERE IN THE CORRECT FOLDERS TO RUN BROWNIE COMMANDS.

OUR CODE WAS STILL NOT RUNNING PROPERLY, UNTIL WE REALIZED THAT TO RUN THE `_SETTOKENURI` COMMAND IN OUR CONTRACT, WE HAD TO CHANGE THE PROTOCOL TO `ERC721STORAGEURI`.

APPARENTLY THE `_SETTOKENURI` COMMAND HAD BEEN PHASED OUT OF THE NEWEST VERSION OF THE ERC721 PROTOCOL.

## FINAL STEPS

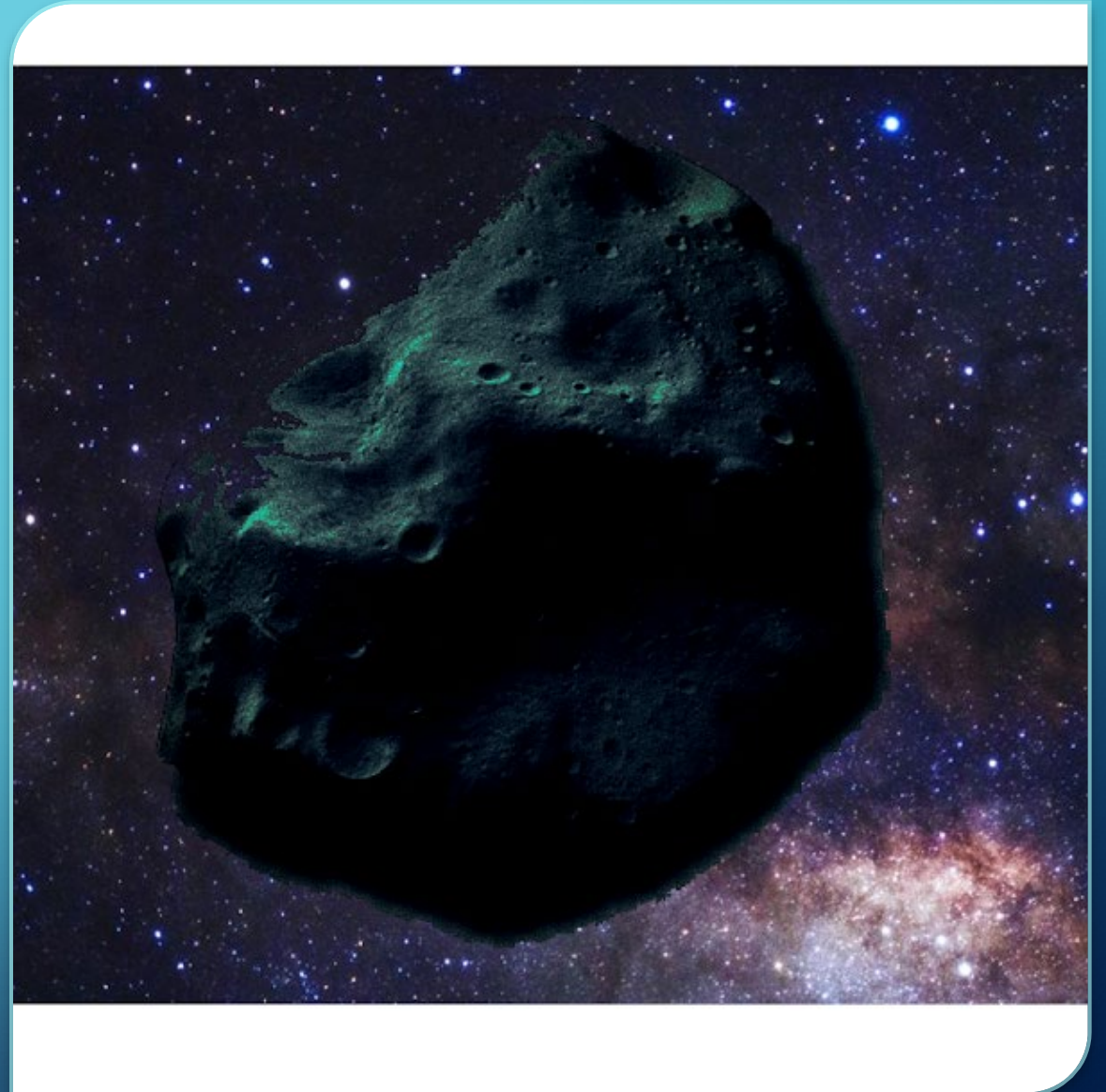
- Once this was debugged, along with a few other corrections we were able to mint to the OpenSea testnet. But to our disappointment the images were not appearing.
- Finally, we realized we needed to point to the correct IPFS url to capture the image. Our Piece of Alderaan collectible, was finally minted onto the testnet for all to see.





# CONCLUSION

- We started to write randomization code into our smart contract and python scripts to generate new and unique planetoids. But the time constraint of this project prevented us from finishing that portion. That portion of the project would require using Chainlink for the randomization.
- Instead, we tried to create several versions of the NFTs and posted them to OpenSea.





# FRONTEND DESIGNED

## Pieces of Alderaan

Brought to you by the Mos Eisley Market



### ***Alderaan***

Alderaan, located in the Core Worlds, the second planet in the Alderaan system and the home to many famous heroes, including Leia Organa Solo and, aBail Organa.

Renowned galaxy-wide for their planet's unspoiled beauty, refined culture, and commitment to peace, Alderaanians worked with and around the land to preserve as much of the natural surroundings as they could.

### ***Destruction of Alderaan***

"Since you are reluctant to provide us with the location of the Rebel base, I have chosen to test this station's destructive power on your home planet of Alderaan."  
- Grand Moff Tarkin



### **A long time ago, now here to stay...**

The Planet Alderaan, once the center of the Old Republic and home to numerous nobility, was destroyed by a giant space laser operated by The Empire.

Now, for the first time, you can own a piece of galactic history by purchasing your own Piece of Alderaan NFT.

100% verifiable and authentically minted on the Ethereum blockchain

