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```
NFT Art: 'Endangered  
Species' {
```

```
< Erfan Hajiamouassar, Gerald Howard, Scott Phillips >
```

```
}
```

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NFT_Art [Endangered Species]
```

Contents Of 'Presentation';

- * Project Overview
- * Approach / Process
- * Data
- * Solidity
- * Python/Streamlit
- * Opensea
- * Challenges
- * Taking it further

NFT_Art [Endangered Species]

Project Overview;

Using various front-end and back-end technologies, along with 8 unique custom art pieces (endangered species), we created a user interface that allows a user to decide which artwork they are interested in and returns relevant data about the artwork. We also tokenize the art pieces using an OpenZeppelin contract, and use Opensea to list them for sale.

NFT_Art [Endangered Species]

Technologies;

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NFT_Art [Endangered Species]

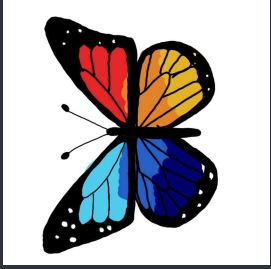
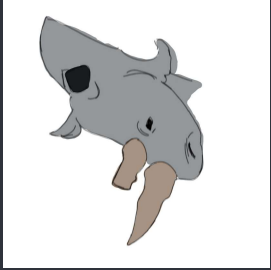
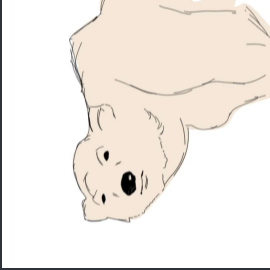
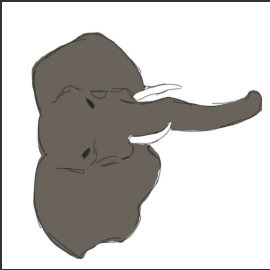
Approach/Process;



NFT_Art [Endangered Species]

Data;

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NFT_Art [Endangered Species]

Data, Continued;

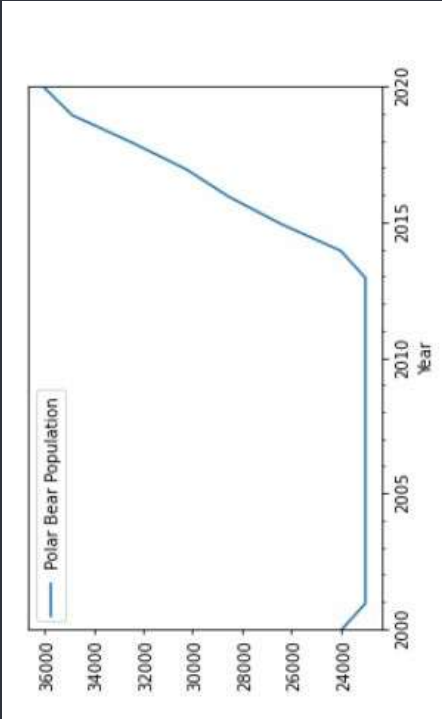
Polar Bear, others...

Category	Fact
Status	Vulnerable Species
Current Population	26,000
Habitat	Arctic sea ice
Cause of Status	Climate warming, pollution, disease, overharvesting, sea ice loss
Climate change impacts	Sea ice loss
Human-Wildlife conflict	Commercial activity, conflicts and encounters, pollution, increased shipping in the Bering Strait.
Poaching and illegal wildlife trade:	Overharvesting
Organizations that help:	Polar bears international, World Wildlife Fund. They help by reducing conflict, monitoring populations, reducing industrial impacts, protecting critical habitat.
What can humans do to help:	A financial gift, corporate sponsorship, fundraising, symbolic Polar Bear adoption.
Sources:	https://polarbearsinternational.org/polar-bears-changing-arctic/polar-bear-facts/status/

NFT_Art [Endangered Species]

Data, Continued;

Polar Bear, others...



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Year	Polar Bear Population
2000	24000
2001	23000
2002	23000
2003	23000
2004	23000
2005	23000
2006	23000
2007	23000
2008	23000
2009	23000
2010	23000
2011	23000
2012	23000
2013	23000
2014	24000
2015	26450
2016	28550
2017	30254
2018	32485
2019	34885
2020	36000

NFT_Art [Endangered Species]

Solidity;

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 import "@openzeppelin/contracts/token/ERC721/extensions/ERC721URIStorage.sol";
5 import "@openzeppelin/contracts/access/Ownable.sol";
6
7 contract Endangered is ERC721URIStorage, Ownable {
8
9     uint256 tokenId = 0;
10
11     constructor() ERC721("Endangered", "END") {}
12
13     function mint(string memory uri) public onlyOwner {
14         _mint(msg.sender, tokenId);
15         _setTokenURI(tokenId, uri);
16         tokenId++;
17     }
18 }
```

NFT_Art [Endangered Species]

Python / Streamlit;

```

1 #####
2 # Imports
3 import streamlit as st
4 from dataclasses import dataclass
5 from typing import Any, List
6 from web3 import Web3
7 w3 = Web3(Web3.HTTPProvider('HTTP://127.0.0.1:7545'))
8 #####
9 # Endangered Animals Information
10 #####
11 # Database of Endangered Animals including their name, open sea address, rating and hourly cost per Ether.
12 # A single Ether is currently valued at $1,500
13 animals_database = {
14     "Javan Rhino": ["Javan Rhino", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/0/", "> 1000", "Natural catastrophes",
15     "Mountain gorilla": ["Mountain Gorilla", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/1/", "> 1000", "Habitat loss",
16     "Tiger": ["Tiger", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/2/", "> 5000", "Over 95 percent of their habitat",
17     "Polar bear": ["Polar Bear", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/3/", "20,000-30,000", "Climate warming",
18     "Plains bison": ["Plains Bison", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/4/", "30,000-40,000", "Habitat loss",
19     "African forest elephant": ["African Forest Elephant", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/5/", "30,000",
20     "Monarch butterfly": ["Monarch Butterfly", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/6/", "250,000-275,000",
21     "Sea turtle": ["Sea Turtle", "https://testnets.opensea.io/assets/rinkeby/0xbe53f18f7288216c7ae03753b188626ceca5e50c/7/", "6,500,000-6,600,000", "Poaching",
22 }
23
24 # A list of the FinTech Finder candidates first names
25 animals = ["Javan rhino", "Mountain gorilla", "Tiger", "Polar bear", "Plains bison", "African forest elephant", "Monarch butterfly", "Sea turtle"]

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NFT_Art [Endangered Species]

Streamlit;

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NFT_Art [Endangered Species]

Endangered NFTs

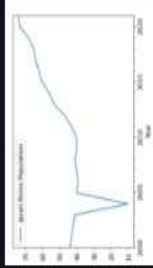
A charity NFT project

Scott Phillips, a renowned artist from Colorado has created a new collection in order to save endangered animals. Endangered NFTs is an exclusive collection that features endangered animals. This one time auction will have the profits sent directly to the World Wildlife Fund as donation.

Name: Javan Rhino



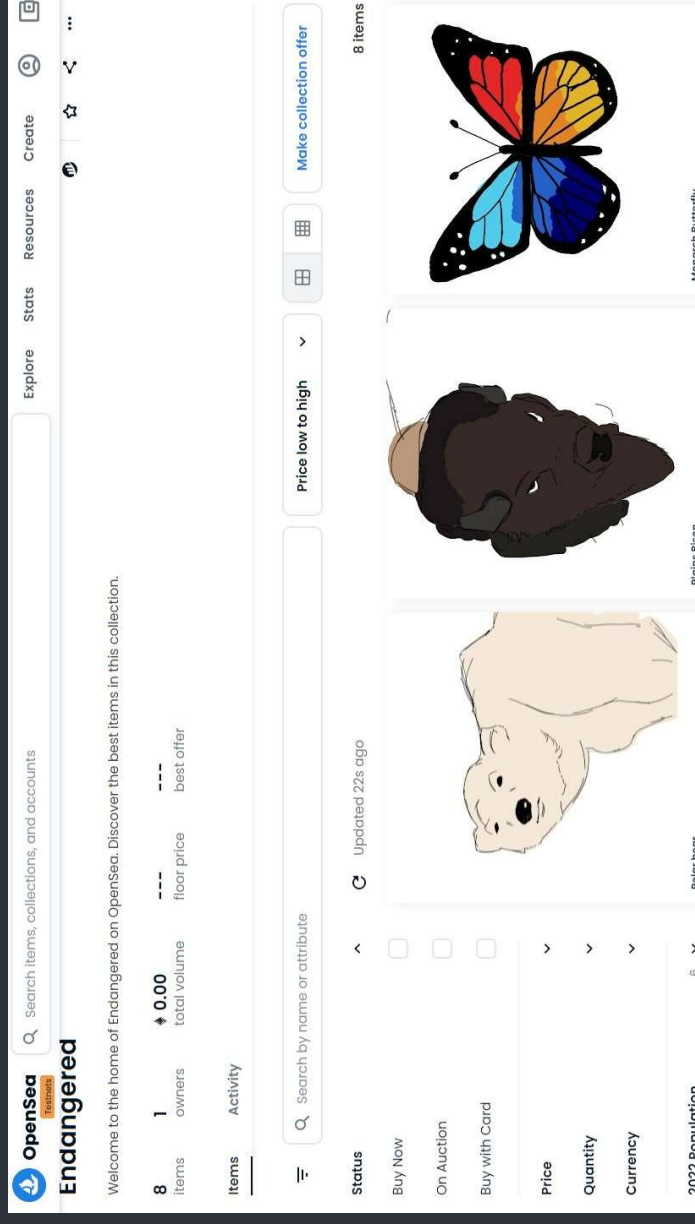
2022 Population: > 1000



Cause of Status: Natural catastrophes, habitat loss, diseases, poaching, and potential inbreeding

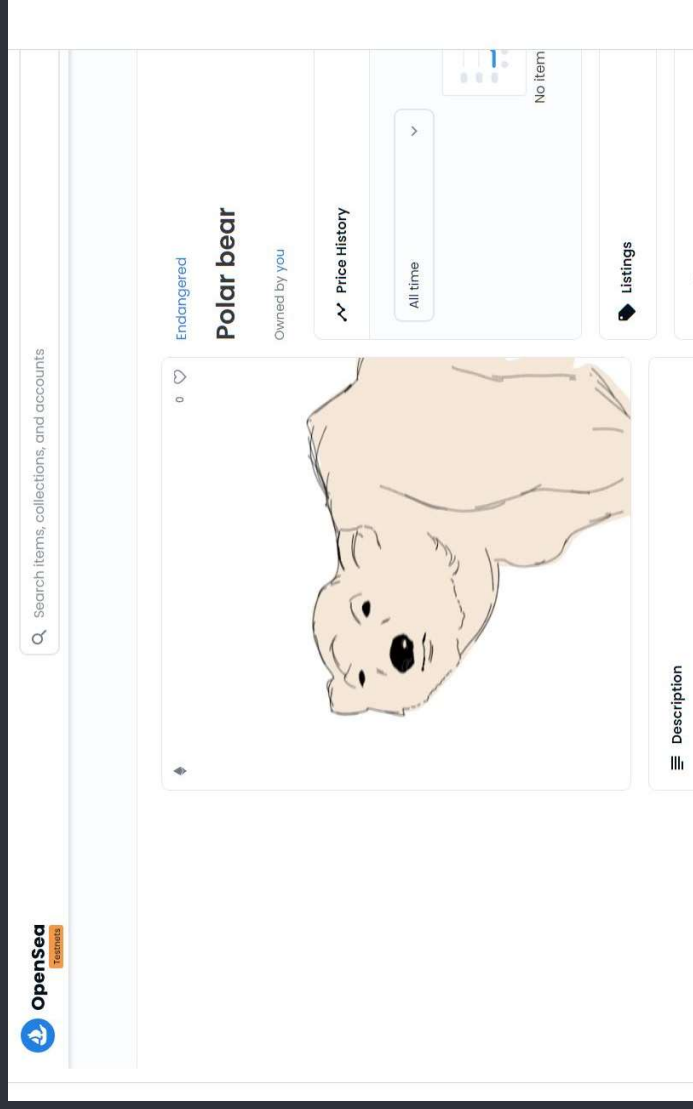
Leading Organizations: https://campaign.aawf.org/support-african-elephants/?utm_source=social&utm_medium=cpc&utm_campaign=social&gclid=Cj0KCQjwuuuKX8hCRARIsACgM0ivmnvs3lI6gNVFog4z4LyGq5x9hBDH1Zv0r7jZ_n-Ba4cCYwmsaAvhEEALw_wcB

Opensea;



NFT_Art [Endangered Species]

OpenSea;



NFT_Art [Endangered Species]

```
1  Opensea;
```

```
7  https://testnets.opensea.io/collection/endangered?search\[sortA  
8  scending\]=true&search\[sortBy\]=UNIT\_PRICE
```

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NFT_Art [Endangered Species]
```

```
Etherscan;
```

```
https://rinkeby.etherscan.io/address/0xBE53F18  
F7288216C7aE03753b188626Ceca5e50c
```

```
NFT_Art [Endangered Species]
```

Challenges;

- Finding the right contract using OpenZeppelin
- Live demonstration of steamlit
- Not being able to test our theory that people will actually buy the artwork

NFT_Art [Endangered Species]

Taking it further;

- Use professional Artist, Randomized Features - introduce rarity
- Make a professional website to introduce the project
- Implement royalties feature to donate the proceeds to charity
- Make wallets for each wildlife organization to track the donations

NFT_Art [Endangered Species]