# Antify

The fungible token alternative for artists

# Executive Summary

- Blockchain technology can offer a number of benefits vs more traditional methods of distributing and purchasing music.

- As both artists and music fans, our goal was to explore how blockchain technology, specifically through smart contracts, can provide enhanced transparency of artist compensation in the music industry as compared to the streaming models largely used today.

# Concept

- Common pitfalls of the streaming model
  - Low royalty distribution to artists/creators
  - Decline in ownership - i.e. physical and digital music sales
  - Equity - i.e. smaller artists may have little benefit

- User story
  - As an artist, I want to offer my music for purchase directly to fans & receive royalties for each sale.
  - As a music fan, I want to purchase music directly from artists I follow.

# Data Techniques & Technology Used

- ERC20
  - simple fungible-token smart contract standard functions
  - interchangeable
- Remix IDE
  - code editor
  - compiles and deploys smart contracts
  - ability to interact with deployed contract through a devNetwork
- Ganache - Truffle Suite
  - devNetwork for contract testing and demonstration
- Streamlit
  - build user interface and show ledgers

# Approach

- **As an artist, I want...**
  - Royalties calculated & distributed per audio track download
  - Features showing royalties tracked/paid to each artist
  - Track released for download after purchase
- **As a music fan, I want...**
  - Single payment per audio track to download
  - Features showing royalties tracked/paid to each artist
  - Audio track retrieved through download link
- **Key functionalities of ERC20**
  - Split payments received as royalties & release of token
  - Ability to call total token supply available & held by accounts
  - Distribution of download held off-chain via link in token

# Demo

# Next Steps

- Challenges
  - Use of ERC20 vs ERC721
  - connections across ganache, vs code, remix ide, and metamask
  - download functionality cannot be tracked - i.e. once the download link is released, anyone with the link will be able to download
- Additional Research
  - ERC1155 - multi-token standard (combination of fungible and non-fungible characteristics)
  - ERC721 - NFT
- Future Development
  - Streaming access rights vs single download
  - dAPPs to expand functionality
  - Database off-chain to hold songs/artists
  - User interface for interacting with contracts

# Links

- Github Repo- https://github.com/PCEworkflow/antify