PAWCASSO

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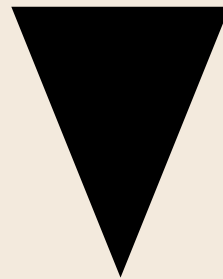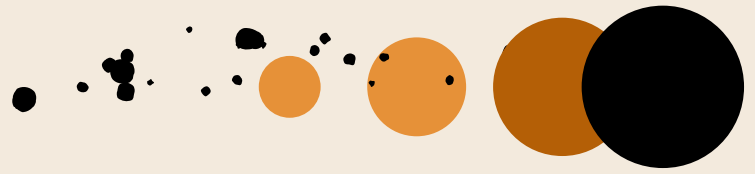
OUR TEAM

DID YOU KNOW?

1989

1972

1966

1933

1890

1882

- The Princeton Art Museum was formally established in 1882.

- The Museum houses over 112,000 works of art today.

- Much of the Museum's inventory has been donated, particularly from Princeton alumni.

- Gallery space is a premium: only ~5% of the collections are ever on display at any given moment.

- The Museum is closed due to the pandemic but is also undergoing construction and will reopen in 2024.

ART MUSEUM CONSTRUCTION

Removing the stained glass from the museum!

(Images courtesy of our adviser Pi)

THE ISSUE

There is a visible disconnect between Princeton students and the Princeton Art Museum

PAWCASSO

provides **curated Art Museum content** from Princeton's collections in a web application using a Tinder-like swiping interface and a machine learning model.

FEATURES

SEE MORE OF WHAT YOU LIKE

Swipe right to add to your board and see more like it

CARD SWIPING

SEE IT & LEARN MORE
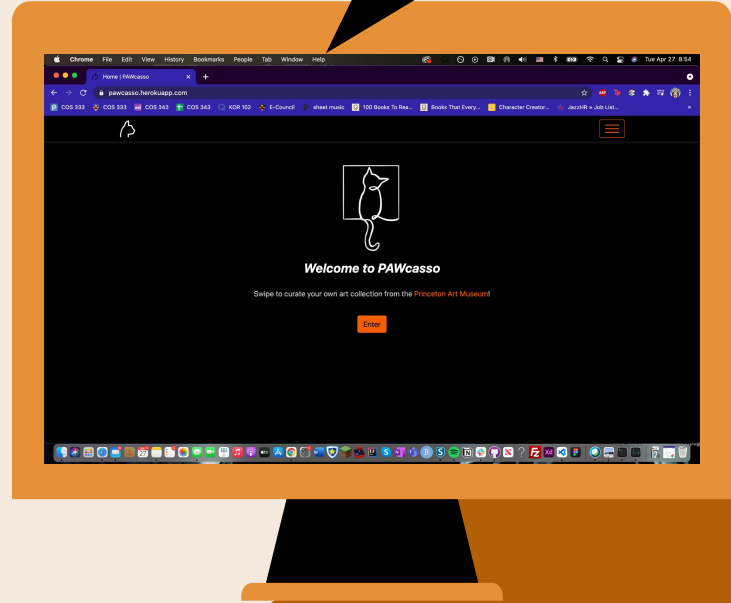
View your likes & stats, unlike, and read more

ART BOARD

GET IT IN YOUR INBOX

Experience art passively with opt-in emails

EMAILS

DEMONSTRATION

http://pawcasso.herokuapp.com/

ARCHITECTURE & IMPLEMENTATION

data storage

logic

visual

deployment

DATABASE TECH

PostgreSQL

BACKEND

Python, Flask

FRONTEND

HTML, CSS,
Bootstrap,
Javascript,
JQuery, AJAX

TO THE CLOUD

Heroku

DATABASE SCHEMA

USERS

userId	varchar(255)
lastName	varchar(255)
firstName	varchar(255)
emailFrequency	varchar(255)

PREFERENCES

userId	varchar(255)
classification	varchar(255)

SWIPES
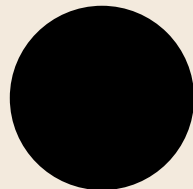
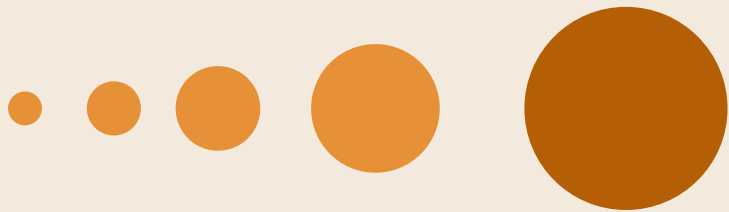|	
objectId	int
userId	varchar(255)
liked	boolean

ML TO RECOMMEND ART

THE ART IS STATIC

- The Princeton Art Museum has a <u>public API</u>

- Preprocessing of objects for machine learning

- Feed 'terms' attached to objects into ML model (bag of words)

- All objects within one classification are compared with each other

- 80% use user's likes to generate an artwork

- 20% show random artwork from preferred classification

STATISTICS

48,938
artworks

with 15 recommendations per artwork

6
classifications

photographs, drawings, prints, paintings, ceramic, sculpture

112,000+
total artworks

in the Princeton Art Museum; 59,862 objects in JSON file

49
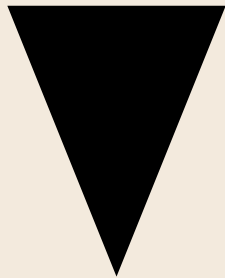**total classifications**

in Vinay's JSON file

ACHIEVEMENTS & TAKEAWAYS

Achievements

- Swiping animation
- NLP model to recommend artworks
- Sending emails
- Profile page features such as statistics and artworks board

Takeaways

- User testing was essential: do it earlier
- Frequent team communication to distribute work
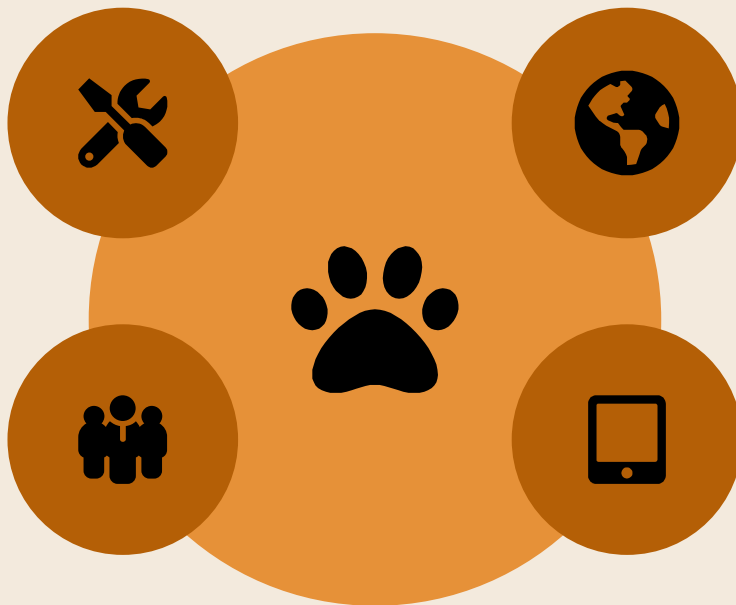- Build each piece incrementally and make sure features work at all stages

WHERE TO NEXT?

CUSTOMIZATION
More advanced ML using computer vision

SHARING
Social media integrations and gamified features

EXPANSION
Users and artworks beyond Princeton

EXHIBITS
Use data to create exhibits in the Art museum

THANK YOU!