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CPSC 547: Information Visualization
Agenda

1. Motivation
2. Explorify
3. Demo
4. Limitations
5. Q&As
Motivation

- **Spotify Platform**
  - The most popular platform for streaming music with millions of users
  - Provides custom visualization for their users data

- **Spotify Year Wrapped Report**
  - Allows Spotify users to view a compilation of data about their activity on the platform
  - It’s only at the end of the year
  - Fairly limited with no interactivity
WHAT IS EXPLORIFY?
Why is Explorify?

- Allows the user to interact with and explore their personal streaming history

- Using Explorify, the user will:
  - Find interesting patterns and facts
  - Discover trends
  - Trigger memories

- In general: geek out about the data
Building Explorify: Data Collection
Explorify: Data Collection

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Explorify: Data Collection

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2. Wait

3. Receive 1 year detailed streaming history*

* It is possible to request data for entire account duration, but data is very sparse/fragmented
Explorify: Data Collection

1. Request data on your Spotify account page. Thanks GDPR!
2. Wait
3. Receive 1 year detailed streaming history*
4. Retrieve additional data from the Spotify Web API
Building Explorify: Creating Explorify
Creating Explorify

- The initial idea(s):
  - Streamchart, track clustering, listening pattern analysis, ...

4. Data and Task Abstractions

There are a total of 5 tasks we will be visualizing within the Explorify platform: Artist-Genre Network, Track Clustering by Audio Features, Artists Stream-graph, Top Artist Over Time and Daily Listening Pattern.
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  - Settle on the most promising idea: the artist-genre network.

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The Process

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  - Iterate, iterate and iterate some more
- In parallel: Learn d3, explore and process the data
The Final Product: Explorify

DEMO
Limitations & Future Work
Limitations 1: Simple Technical Limitations

- Transitions could be better
- Code is messy
- Podcasts are not filtered out
- Some tracks have had slight name changes, making it hard to properly identify them
- UI is not responsive, and wastes too much space
- Some bugs present
- Question mark icons do nothing
Limitations 2: Larger Limitations

- The tool is not very intuitive and the user must do some work before they can see interesting results
- Genres are not displayed very well
  - Possible solution: Multigraph with genres as nodes?
Future Work

- User testing
- Select multiple days in calendar
- Add zooming to timeline chart
- More edgemap options!
  - More edge types: related artists, shared sessions, ...
  - More color scales: Artist popularity, ...
- Fix the technical issues
What is Explorify?

- A dashboard visualizing your Spotify streaming history

- Several Interactive and interconnected views
  - Main view: edgemap with artists as nodes
    - With control panel
  - Several supporting views:
    - Calendar heatmap
    - Popularity barchart
    - Timeline Gantt chart
Jonatan's Storage Room

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