

Data Exploration of NEA Grants Awarded to Orchestras 2013-2023

Data Overview

Where I got the data:

- Downloaded all data from NEA grants search [here](#) (organization name field: "orchestra") then filtered to only grants from 2013 to present (947 grants)

Explanation of relevant columns in the [dataset](#):

- "Discipline / Field": the general area of the grant
- "Category": a broader grant area
- "Project Description": a text description of the purpose of the grant
- "Grant Amount": the amount of money awarded for the grant in dollars
- "Bart_label": top three topics of each project, added by Kelsey by calculating semantic similarity between the Project Description and a list of 18 topics using word embeddings from LLM.
 - List of topics is: ["concert series", "composer residency", "composer commission", "festival", "conference", "operational cost", "competition", "job development", "covid relief", "opera", "cultural diversity", "community outreach", "student education", "masterclass teaching", "chamber music", "tour", "recording", "jazz"]
- "LDA_label": highest scoring topic for one of six topics represented over all Project Descriptions, added by Kelsey using LDA algorithm
 - Because this is an unsupervised ML method that auto-assigns labels that are not controlled by human input, the topics are kind of vague, but roughly correspond to: topic 1 - concerts series; topic 2 - education; topic 3 - composer commissions; topic 4 - community outreach; topic 5 - professional development; topic 6 - covid relief.
- "Lemma_list": a list of keywords from each Project Description, excluding overly common words like "the/of/to/etc," most place names, and merging words with the same underlying meaning (e.g. "performance/performances"), added by Kelsey.

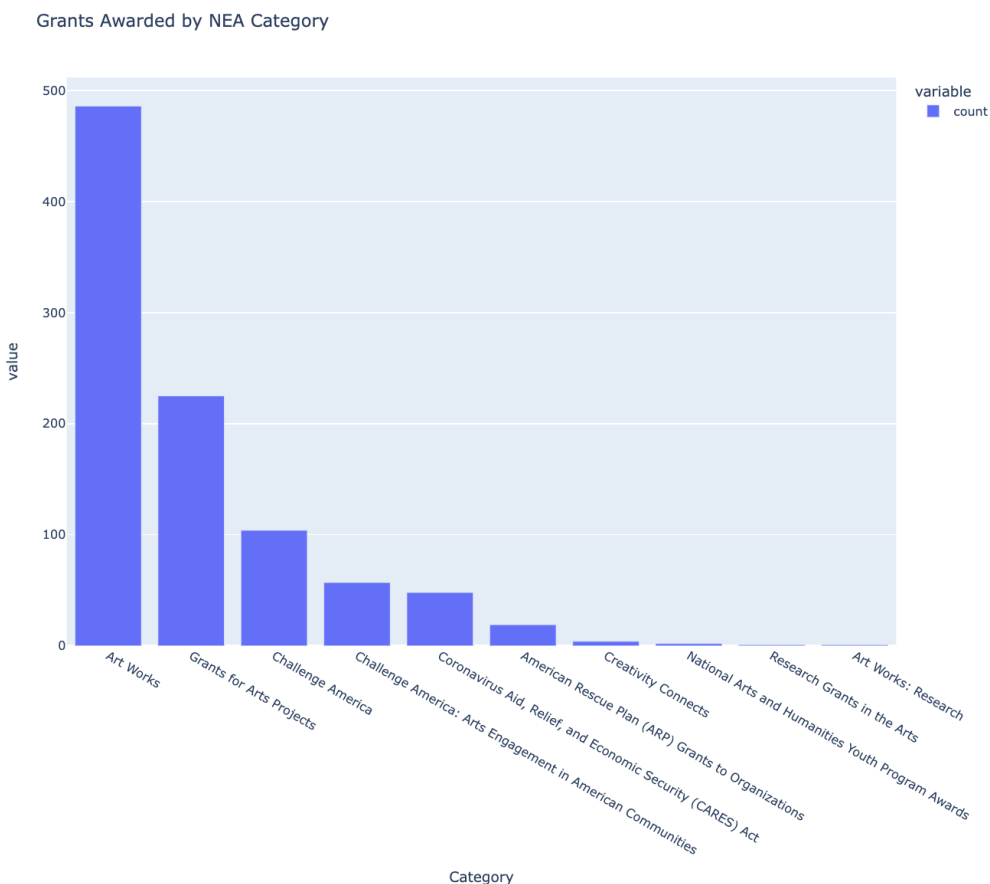
Key questions

Which types of projects were frequently awarded grants (regardless of grant amount)?

I counted the number of grants awarded for each of the NEA fields (Category and Discipline / Field). Grants for “Art Works” and “Music” were awarded most frequently. However, this seemed obvious since this was specifically awards granted to orchestras, so I also checked the more specific topics I extracted with LLM and LDA.

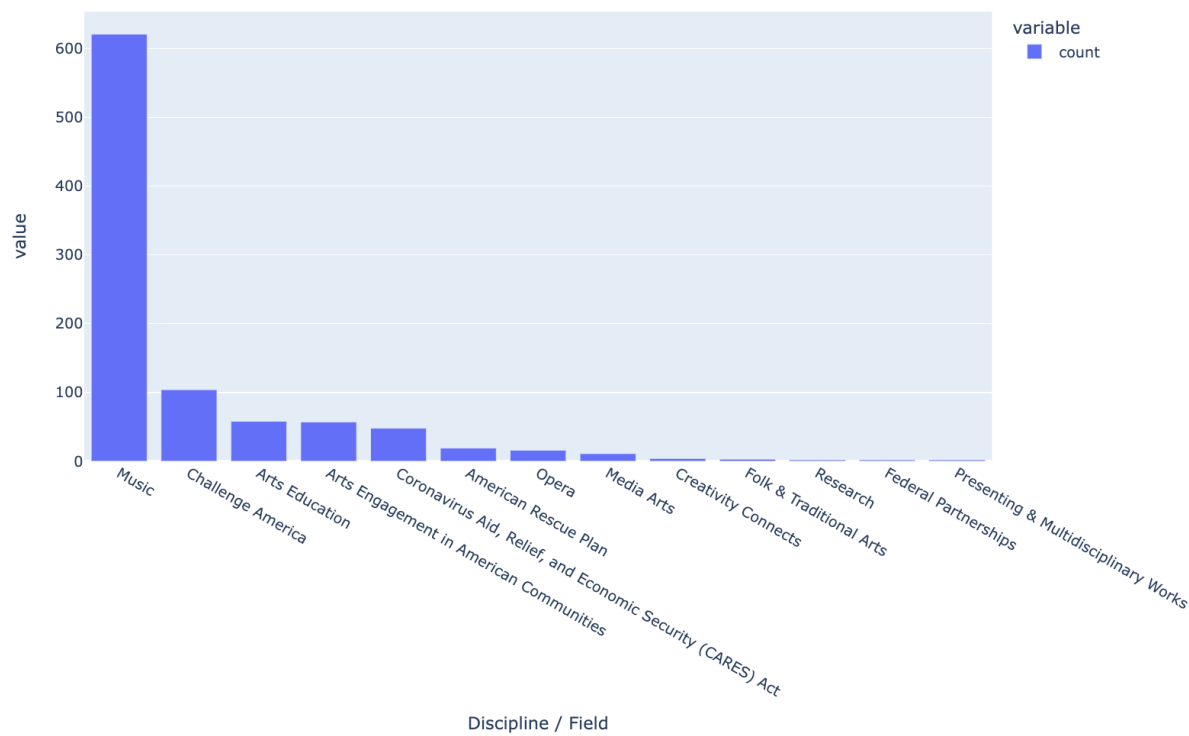
- Projects that specified community outreach (LLM topic) and professional development (LDA topic) in their Project Description were awarded more frequently than other types of projects.

Category

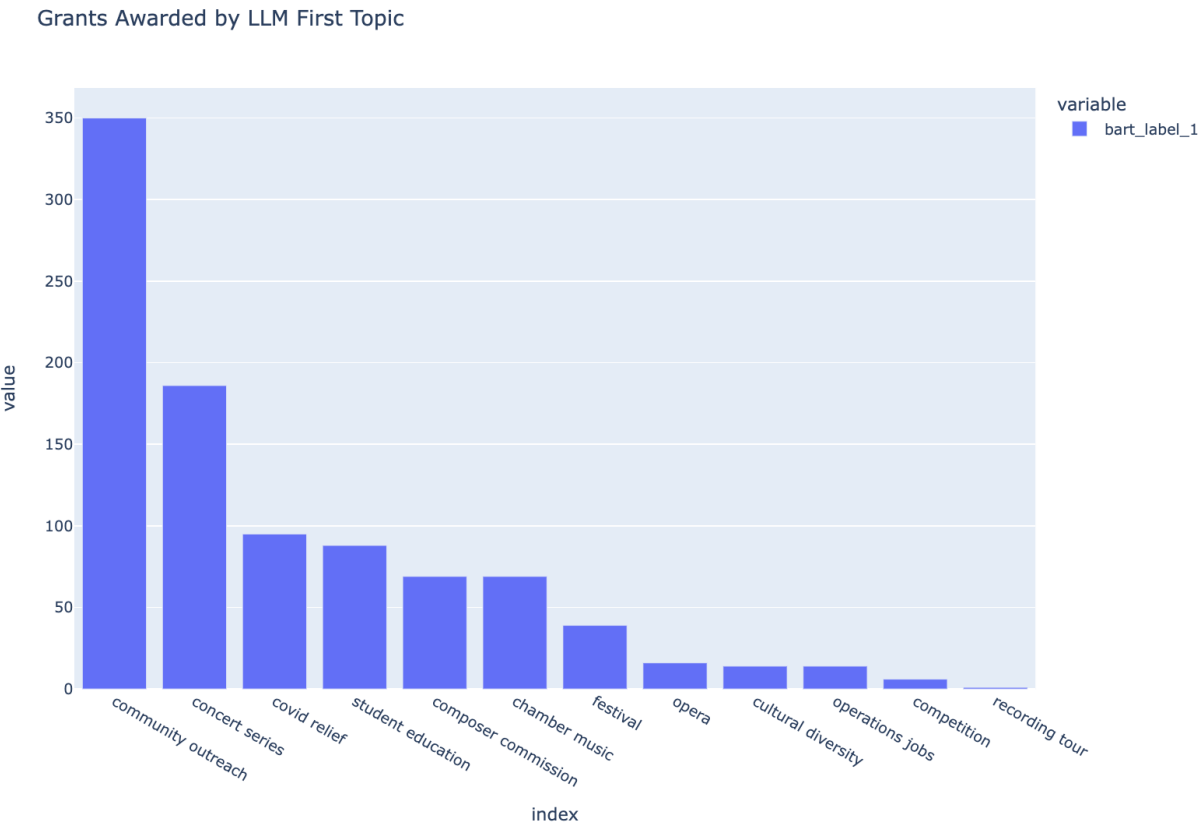


Discipline / Field

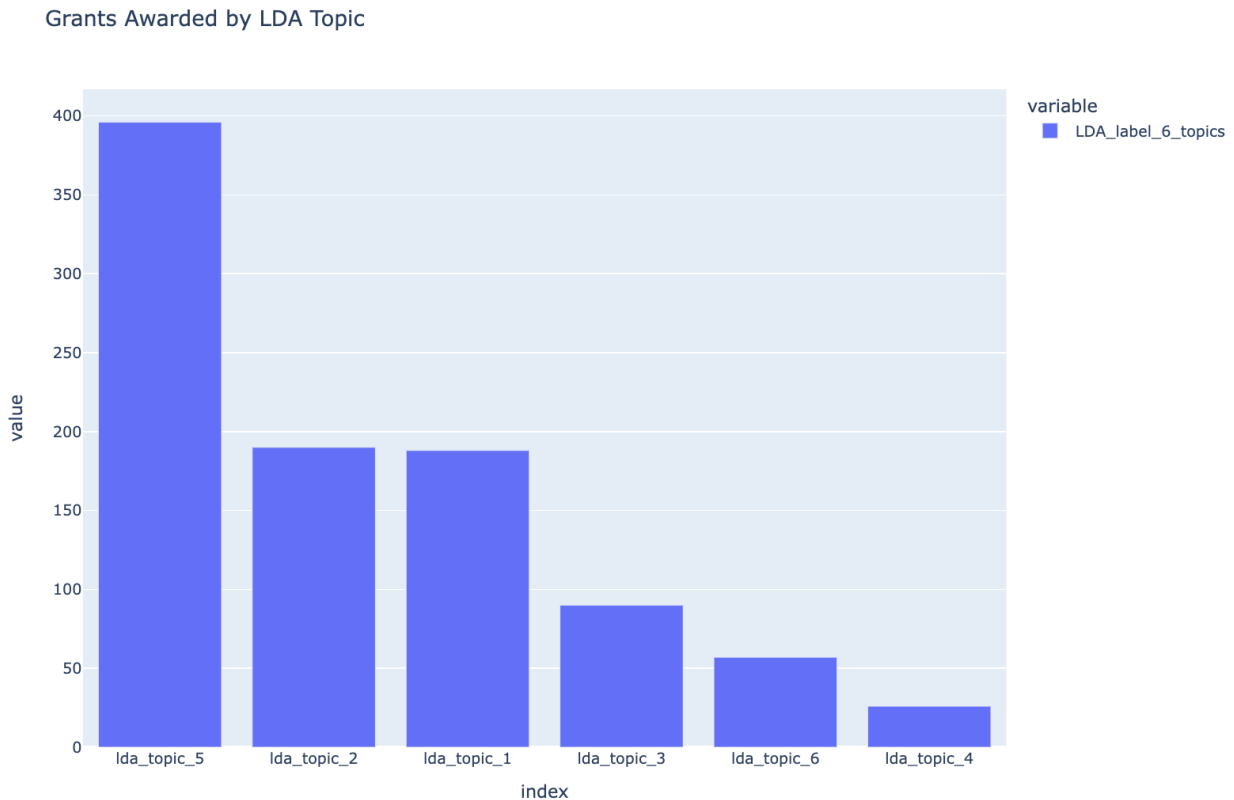
Grants Awarded by NEA Discipline/Field



LLM Label (top label only)



LDA Label

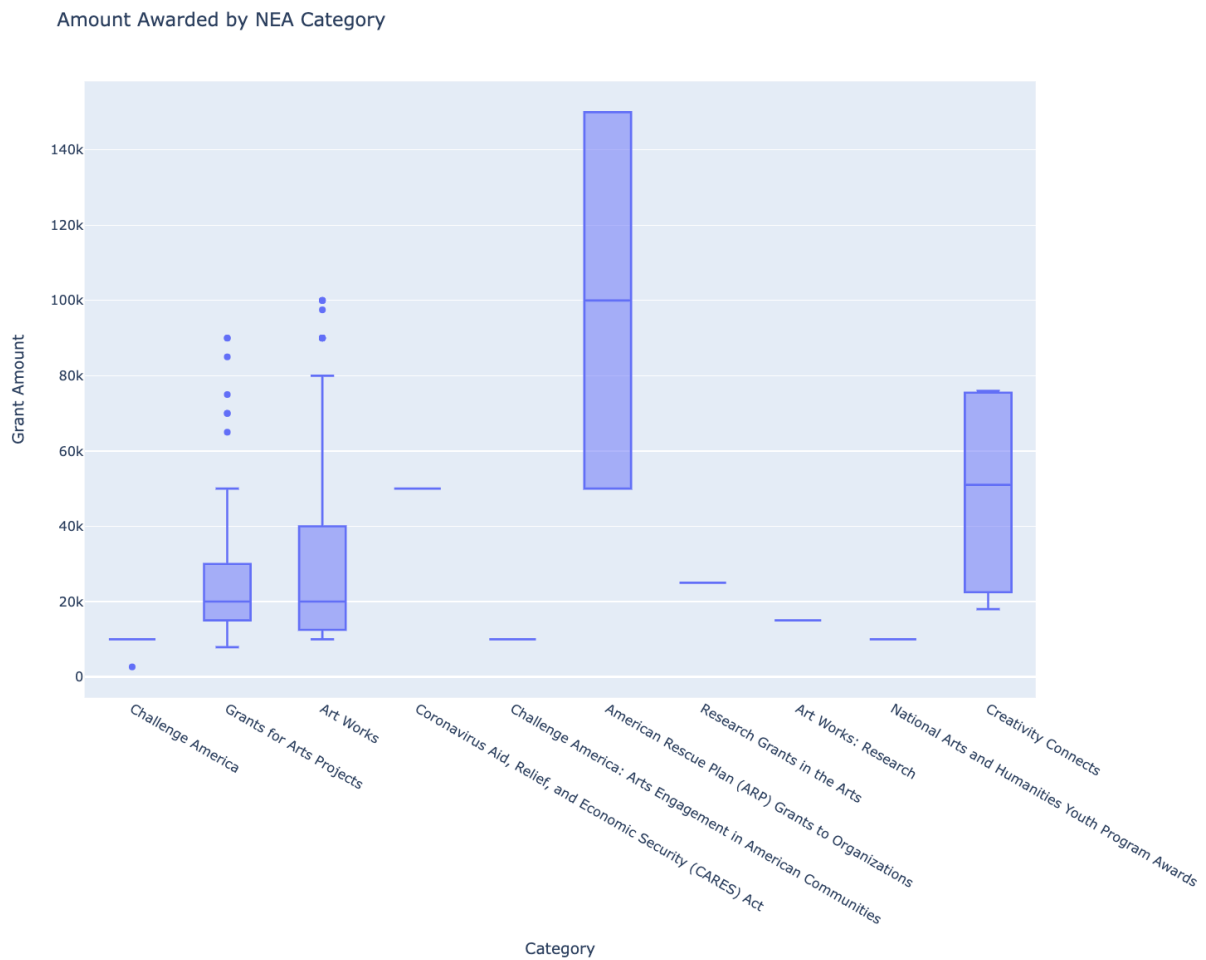


Which types of awards got the most grant money?

I plotted the range of grant amounts for each of the NEA fields (Category and Discipline / Field) to see if there were certain fields that were better funded than others. The awards that received the most money were part of the American Rescue Plan (a covid relief effort), and [Creativity Connects](#), although based on the plots above, the number of awards in these categories was not numerous. The highest-amount awards under the Art Works and Music areas tended to be outliers rather than the norm.

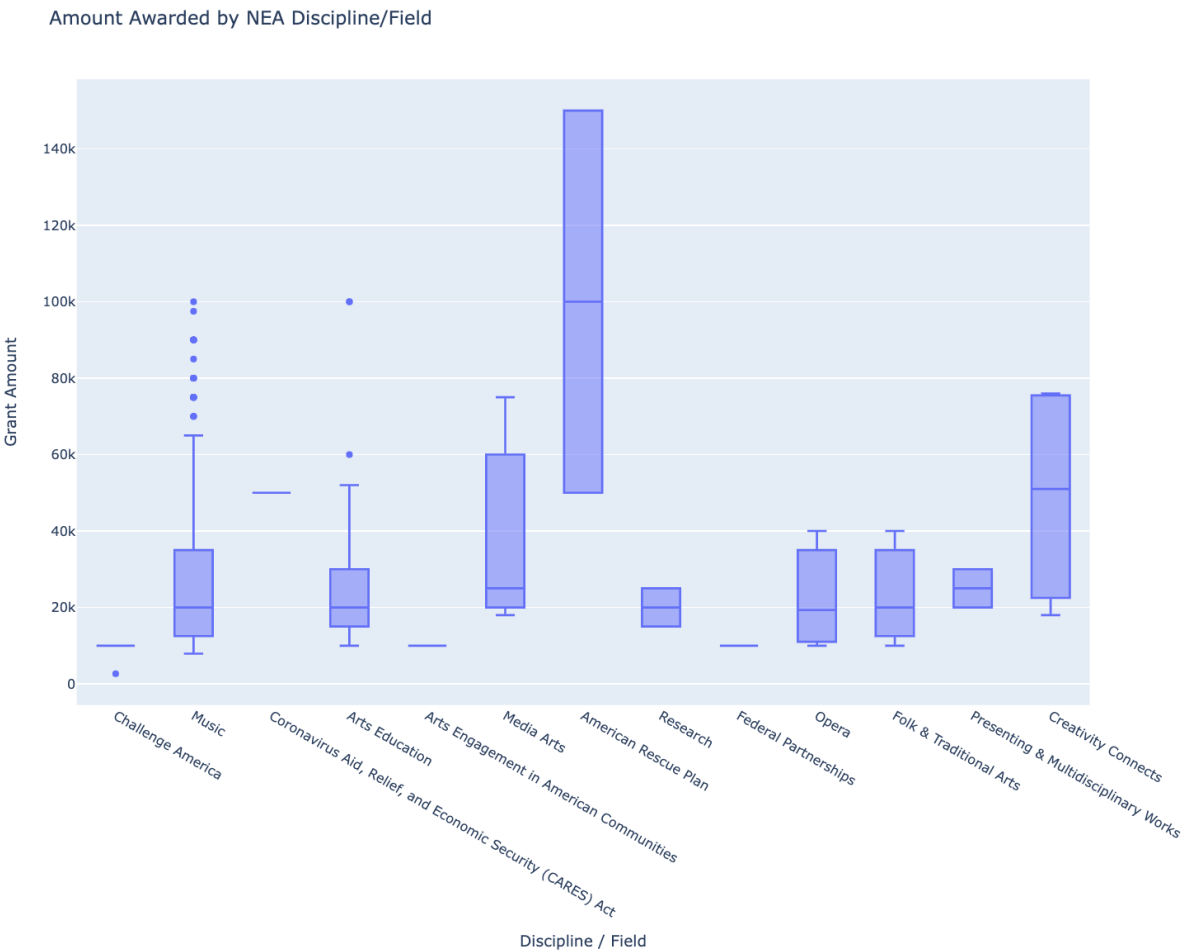
Among more specific topic labels, the most money was awarded for covid relief and operations (most likely in relation to covid relief - second most common label shows this). When not for covid relief, projects about community outreach (LLM and LDA), concert series (LLM), or competitions (LLM) tended to get slightly more money than others.

Category

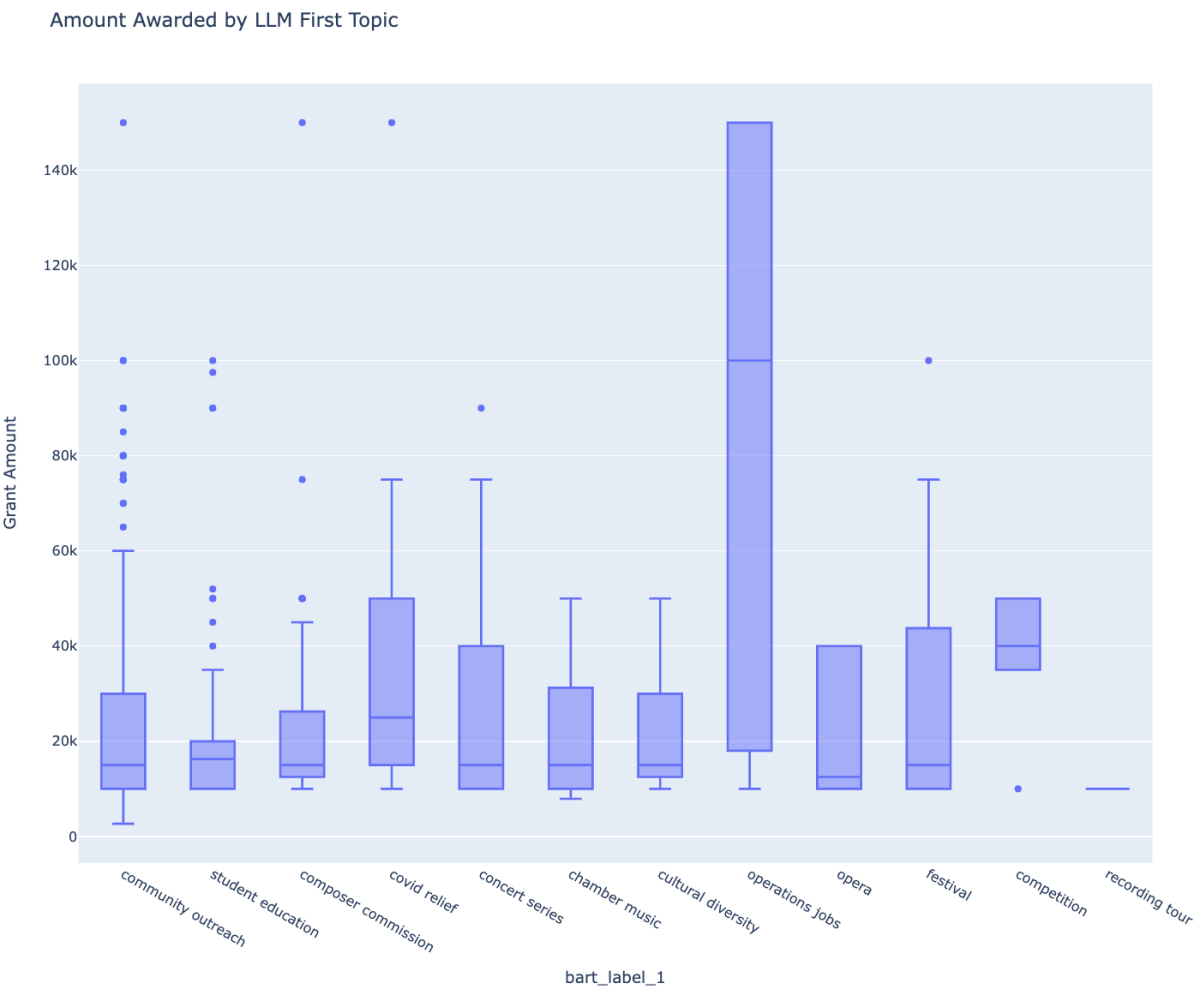


(Flat lines means there is basically no variance in the data - all the awards are for the same amount)

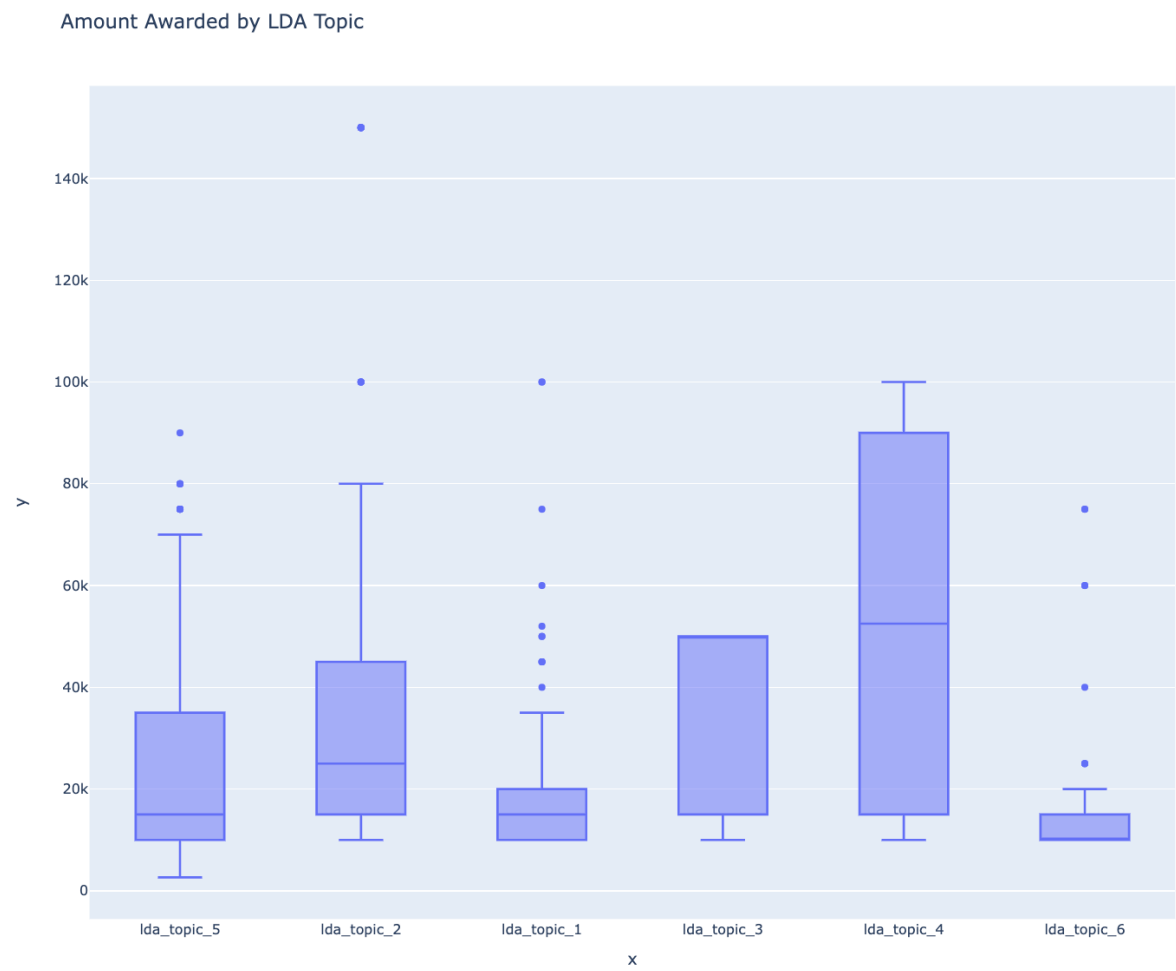
Discipline / Field



LLM Label (top label only)



LDA Label



What kinds of words are represented at each funding level?

Grant Amount (\$)	Top 20 Words
0 - 10k	Concert, support, performance, music, student, school, project, include, program, activity, community, orchestra, perform, feature, artist, work, intend, beneficiary, free, musician
10k - 20k	Music, support, project, concert, performance, program, student, include, school, work, orchestra, community, intend, activity, beneficiary, musician, composer, perform, new, ensemble
20k - 30k	Music, support, include, concert, composer, program, project, work, student, performance, activity, orchestra, new, school, artist, festival,

	feature, musician, educational, intend
30k - 40k	Concert, performance, project, support, composer, music, include, work, orchestra, feature, activity, community, artist, intend, as, new, beneficiary, program, musician, perform
40k - 50k	Support, music, covid, pandemic, performance, personnel, response, composer, concert, cost, activity, include, musician, project, community, work, intend, orchestra, feature, festival
50k - 60k	Program, concert, music, support, performance, content, educational, include, training, artist, audience, britten, broadcast, celebration, class, composer, conduct, instrument, intensive, medium
60k - 70k	Concert, community, orchestra, free, project, support, neighborhood, activity, conduct, music, playin, program, age, beneficiary, include, intend, perform, art, diverse, educational
70k - 80k	Concert, include, music, orchestra, support, activity, community, performance, musician, neighborhood, feature, free, work, conduct, program, symphony, composer, director, educational, perform
80k - 90k	Orchestra, league, leadership, development, skill, national, program, strengthen, support, information, leader, online, provide, communication, conference, service, strategic, emerge, symphony, magazine
90k - 100k	Support, covid, intend, organization, pandemic, recovery, art, school, strengthen, league, orchestra, personnel, program, activity, additional, artist, artistic, assistance, audience, beneficiary
140k - 150k	Support, covid, intend, organization, pandemic, recovery, activity, additional, art, artist, artistic, assistance, audience, beneficiary, benefit, constituency, cultural, description, devastating, economic

(Note: no awards granted for amounts between 100k-140k)

Additional Resources

- All plots are available in [this folder](#) as interactive plots (you can see annotations and zoom). You will need to download the HTML file and then double click it to open (should open in your browser).
- The LDA topics are also available as an interactive visualization (in same folder).
- Spreadsheets with the top words by 10k bin (shown above) and by decile (binned by amount ranges rather than arbitrarily) available [here](#) and [here](#).

NEA music grants source: <https://www.arts.gov/grants/grants-for-arts-projects/music>

Orchestra Grant Tips:

<https://americanorchestras.org/wp-content/uploads/2022/12/Tips-for-Preparing-FY24-NEA-Appliation.pdf>