

A large, thin red circle is centered on the slide, framing the "SMITH DATATHON" text.

SMITH DATATHON

UMD SAC Smith Datathon Kickoff

April 19th, 2022

Datathon | Robert H. Smith School of Business

Overview

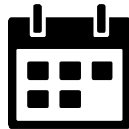
Requirements

Team



4 – 5 students
(mixture of Undergrad
and Graduate)

Timeline



Kick-off/Release Dataset:
4/19 (today! 🤗)

**Submission/Preliminary
Judging:** 4/27 @ 8:00PM

Final Presentations:
4/29 (10:00 AM – 12:00 PM)

*Timeline shown later

Technology



Data Visualization:
Tableau 2020.4 (or newer)
(let us know if you need access)

Data Analysis:
Google Colab
Open Source (R, Python, etc.)

Data



Bandcamp Sales Data
Bandcamp Items Data

Submission



1. Packaged Tableau workbook (.twbx)
2. 5 -7 slide presentation
3. 7 min voice-over Presentation

The Smith Datathon enables students to team-up, showcase their data analytics skills, and sprint to the best solution. With the provided dataset, teams will have several days to model and visualize insights before final presentations and judging.

Presentations will be evaluated using several criteria, ranging from technical impact to creativity in approach.

Submission Criteria

A Single .zip File Containing:

Packaged Data Visualization

File containing the visualization + the data
i.e., packaged Tableau (.twbx)



PowerPoint / Keynote Presentation

5-7 slides to present your insights and solution
(Introduction of Problem / Opportunity,
Findings, Next Steps/Art of the Possible)



Zoom Video


Up to 7 Minute screenshare / audio recording



Teams must submit their **voice-over PowerPoint presentation** and **.ZIP file** to the **Datathon Google Drive** (sent from Professor Moe and Professor Elmaghraby) by **8 pm** on **4/27**.

Schedule

■ Kick-off
 ■ Office Hours
 ■ Deadline
 ■ Final Presentations + Judging

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|--------|--|---|---|--|--|
| Week 1 | Apr 18 | Apr 19 Kickoff / Overview Problem and dataset are shared. 6:30-7:30 PM  You are | Apr 20 | Apr 21 Teams work to analyze data, using Core Consulting Series skills, to deliver novel insight. | Apr 22 |
| | Apr 25 | Apr 26 | Apr 27 Solutions Due for Final Judging** Teams submit presentation of analysis and results 8:00PM | Apr 28 | Apr 29 Final Presentations Finalist teams present, winners selected, and prize awarded 10:00 AM – 12:00 PM |
| Week 2 | Teams work to analyze data, using Core Consulting Series skills, to deliver novel insight. | | | | |

*Solutions will consist of each teams presentation (5-7 slides), summarizing their methods and results.

Scoring Rubric

Importance of the Question: The team's solution identifies an impactful hypothesis and provides adequate support behind any assumptions.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10
Strongly Disagree Neutral Strongly Agree

Novelty of the Insight: The solution has a impactful, actionable insight for the client.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10
Strongly Disagree Neutral Strongly Agree

Quality of the Methodology: The team logically structures and defends their problem-solving approach.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10
Strongly Disagree Neutral Strongly Agree

Quality of Presentation: The team articulated their solution's business case to the judges at a client facing level.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10
Strongly Disagree Neutral Strongly Agree

Score

Team Number

Grand Score Total

Case Background - Bandcamp

“Bandcamp is an online record store and music community where passionate fans discover, connect with, and directly support the artists they love.” (1)

Bandcamp has been an influential platform for up-and-coming artists granting the artists more control over their music sharing. Artists are not only able to upload digital copies of their music, but they can also offer physical CD's, vinyl records, posters, t-shirts and show tickets directly to their fans. In addition, fans can individually support artists by paying more than the suggested retail price for the artist's content.

There has always been a debate on how much artists should get paid for their work. Bandcamp differentiates itself by only taking 10% of revenue from physical item sales and 10-15% of revenue from digital sales (2). For reference, Spotify takes almost 50% of revenue from artists who have their music on Spotify (3). This makes Bandcamp a very attractive first entry point for new artists.

1. <https://www.bandcamp.com/about>

2. <https://www.businessinsider.com/what-is-bandcamp>

3. Ibid



Case Overview

Bandcamp wants to conduct a sales and revenue analysis based on their historical sales in hopes to better position themselves in the music business for years to come. Bandcamp has hired your consulting team to provide historical analysis, forecasting, and market opportunities.

For the **TOP 5** revenue grossing countries, your analysis should cover:

- ☐ An analysis of Bandcamp's most popular items sold (and hypothesis on 'why')
- ☐ An analysis of historical revenue from Bandcamp sales in September 2020 and October 2020
- ☐ Projection of revenue for the next 5-years (2027)
- ☐ In the **United States**, identify an 'under-valued' item and develop a marketing approach to increase the revenue of this item.
- ☐ Outside of music, podcasts, audiobooks; identify a net-new target market where Bandcamp should expend resources to find new artists

Here comes...the Data

| Data | Link |
|-------------------|--|
| Bandcamp Datasets | <u>https://tinyurl.com/UMDDatathon2022</u> |



Data Dictionary – Bandcamp 1 Million Sales



| Column | Meaning |
|------------------|---|
| Id | The unique id of the item that was sold |
| Item_type | The type of object that was sold. A = digital album, P = Physical Items, T = digital tracks |
| Country_code | The country of the buyer (i.e. where the individual who purchased the item was located) abbreviated |
| Country_of_sale | Full country code name of the buyer |
| Amount_paid_fmt | Amount paid in the seller's currency with the currency symbol inlaid to the field |
| Item_price | Price of the item in the seller's currency |
| Item_description | The description for the item involved in the sale |
| Amount_paid | Amount paid in the seller's currency |
| Artist_name | Name of the artist that published the item |
| Currency | What currency was used in the transaction when the sale was made |
| Album_title | The name of the album that was created by the artist |
| Amount_paid_usd | Amount paid by a customer converted to USD using a predefined conversion rate |
| Amount_over_fmt | Amount voluntarily paid over the item price in the seller's currency |
| Sales_date | The date that the sale was made |

Data Dictionary – Bandcamp Albums



| Column | Meaning |
|---------------|--|
| Id | The unique id of the item that was sold |
| Name | The name of the item that was sold (i.e. an album, a single track) |
| dateModified | If the item was modified after publishing this is the last date that change occurred on |
| Keywords | Potentially could be the genre, instruments in the music, but mostly general description |
| @type | What type of item the record is referring to |
| datePublished | The date that the musical content was published to Bandcamp |

Technical Support

Facing a technical issue? Can't access the data? Tableau won't load? Reach out to the tech support email box below!

umddatathontechinquiry@gmail.com

Note: To provide an equal playing field, please refrain from asking for technical guidance for your solution.

Additional Resources

| Topic | Link/ Resource | Resource Description |
|--------------------------------------|---|---|
| Data Visualization | Tableau Desktop: https://www.tableau.com/learn/training | Training resources for two of the leading data visualization platforms on the market today. |
| Google Colab | https://research.google.com/colaboratory/faq.html | Frequently asked questions regarding Google Colab and it's capabilities |
| Core Consulting Series (CCS) Modules | http://bit.ly/datathonCCS | A consolidated resource deck containing the outcomes from the CCS workshop on 4/15. |
| Technical Support Mailbox | umddatathontechinquiry@gmail.com | Technical support resource for any issues pertaining to access to data, technology issues, etc. |
| Pandas Merge | https://tinyurl.com/pandasmerge | Documentation on merging Pandas Dataframes based on table keys. |