

# **Team 16: Hats and Glasses**

## Liberty Mutual TechStart Curriculum ITT Program

## **Amazon Music Reviews Data Analytics**

*Lauren Hager:* Backend Developer, Scrum Master

*Elizabeth Myers:* Backend Developer, Scrum Master

*Justin Park:* Frontend Developer, Scrum Master

*Nick Rodriguez:* Backend Developer, Scrum Master

*Dakota Whelchel:* Frontend Developer, Scrum Master

*Jungyoon Yu:* Frontend Developer, Scrum Master

## 1. MISSION STATEMENT

Our mission is to demonstrate and effectively utilize our full-stack development skills to provide our users with useful and understandable data analytics on Amazon music products.

## 2. DETAILED DESCRIPTION

For our project, we created a web application with a user-friendly UI to display information about music products sold on Amazon's e-commerce website. An analytics dashboard summarizes the data and information about music reviews to provide the user useful insights into the music sold on Amazon. Our web application also provides a product detail page which allows users to use a form to search and filter by specific information in order to gain a deeper understanding of individual Amazon music products through their reviews. This data analytics web app is a full-stack application, as the backend retrieves data from the Amazon music dataset through parameterized queries which it sends to the frontend through API calls.

## 3. TECHNOLOGIES USED

For our application, the Amazon song review dataset is stored in a MySQL database. The backend utilized a Java Spring Boot framework and JDBC to make queries to the database to retrieve the data information as needed. On the frontend, the React JavaScript library is utilized to clearly display the information returned through API calls on the backend.

## 4. PROJECT LIMITATIONS

While our web application has a database, backend, and frontend that are deployed and individually functional, our finished product did not meet all aspects of our original design plan. Due to the scope of our project, time constrictions, and several development hurdles, we could not connect our database to our backend in order to supply the deployed frontend with data from our deployed database. Thus, while our project functions well in a local environment, our web application cannot currently be accessed otherwise. While we acknowledge that our finished product was not what we had originally intended, we have gained valuable insight into project development through this experience that we can transfer to future project development. In upcoming projects, we plan on starting with a smaller project scope, as well as connecting the deployed components first rather than starting with individual development on them like we did for this project.

## 5. WIREFRAMES

A screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generated

A screenshot of a social media post

Description automatically generated

3

## 6. ENTITY RELATIONSHIP DIAGRAM

A screenshot of a cell phone

Description automatically generated

## 7. API CONTRACT

### Retrieving all Reviews

**HTTP Method:**GET  
**URL:** /api/music/reviews?limit={numberOfRecords}&offset={startPosition}  
**RequestBody:** None  
**ResponseBody:** JSON string containing the requested reviews data

[

{

"Score":"3.0",

"Price":null,

"Helpfulness":"1/3",

"UserId":"AR2PDI0J5F55A",

"HelpfulnessRatio":"0",

"Title":"Blues Train",

"Summary":"Big Joe My Main Man",

"ProductId":"B00008FG06",

"ProfileName":"Brian Carson "Mobluesboy" ",

"Text":"This record is ok, I love Big Joe and this is one of Roomful's great line-ups, but. I thought Joe was gettin to old when I first heard this record but I was talking with some of the Roomful guys and they confirmed my suspicions that Big Joe did'nt want to put his false teeth in, and you can sure tell. Look for the double CD which includes the Cleanhead Vinson record also. Worth having but there are better Big Joe Cd's, where he does have his teeth in.","ReviewId":"1","Date":"2008-04-10 00:00:00"

},

{

…

}

]

### Retrieving all Scores

**HTTP Method:**GET  
**URL:** /api/music/scores   
**RequestBody:** None  
**ResponseBody:**

{

"1.0":56,

"2.0":46,

"3.0":72,

"4.0":179,

"5.0":646

}

### Retrieving Product by ProductId

**HTTP Method:**GET  
**URL:** /api/music/product/productId/{productId}   
**RequestBody:** None  
**ResponseBody:**

{

"scores":

{

"4.0":"1",

"5.0":"1"

},

"dates":

{

"2009-08":"1",

"2003-04":"1"

}

}

### Retrieving Product by ProductName

**HTTP Method:**GET  
**URL:** /api/music/product/productName/{productName}  
**RequestBody:** None  
**ResponseBody:**

{

"scores":

{

"5.0":"1"

},

"dates":

{

"2011-10":"1"

}

}

### Retrieving Top 10 Most Reviewed Products

**HTTP Method:**GET  
**URL:** /api/music/product/top   
**RequestBody:** None  
**ResponseBody:**

[

{

"numOfReviews":"50",

"productId":"B0001XARYA",

"price":"unknown",

"title":"Tyler Hilton",

"averageScore":"4.86"

},

{

…

}

]

### Retrieving Stats for All Reviews and All Products

**HTTP Method:**GET  
**URL:** /api/music/stats   
**RequestBody:** None  
**ResponseBody:**

{

"totalReviews":"999",

"totalProducts":"163"

}