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Smartphones-Based Web Development  
Fall 2022  
INFO-6350  
Final Project NU Events



## **Introduction**

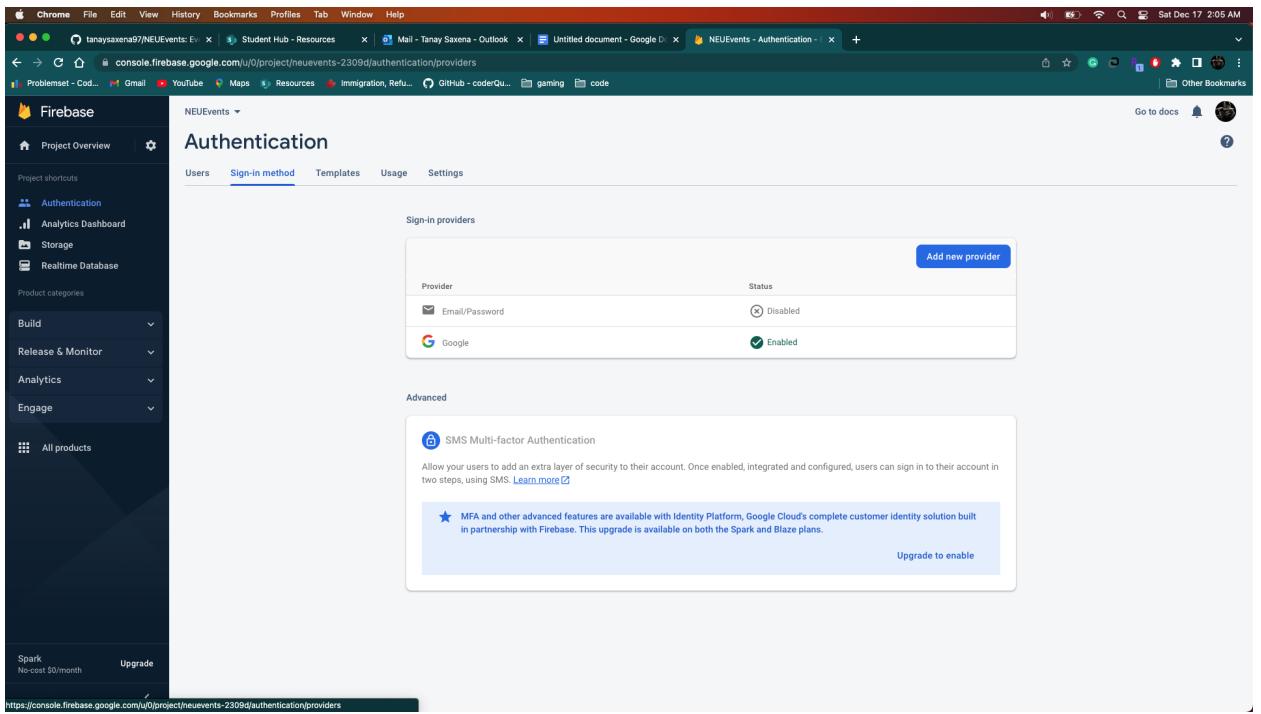
This application aims to provide the latest events and programs on and around the NU campus. The events would range from tech webinars/seminars to career fairs, hackathons, parties, and outdoor programs.

## **Key Features**

- Google login/signup.
- Only authenticated users can access application content.
- Any user can create an event, but only the event creators have the access to update/delete an existing event.
- Boston events are sourced from Eventbrite API.
- Events can be added to the user's calendar.
- Users can view upcoming and latest events and buy tickets for them via redirection to Eventbrite.
- Events can be searched and some common search tags are available for convenience.

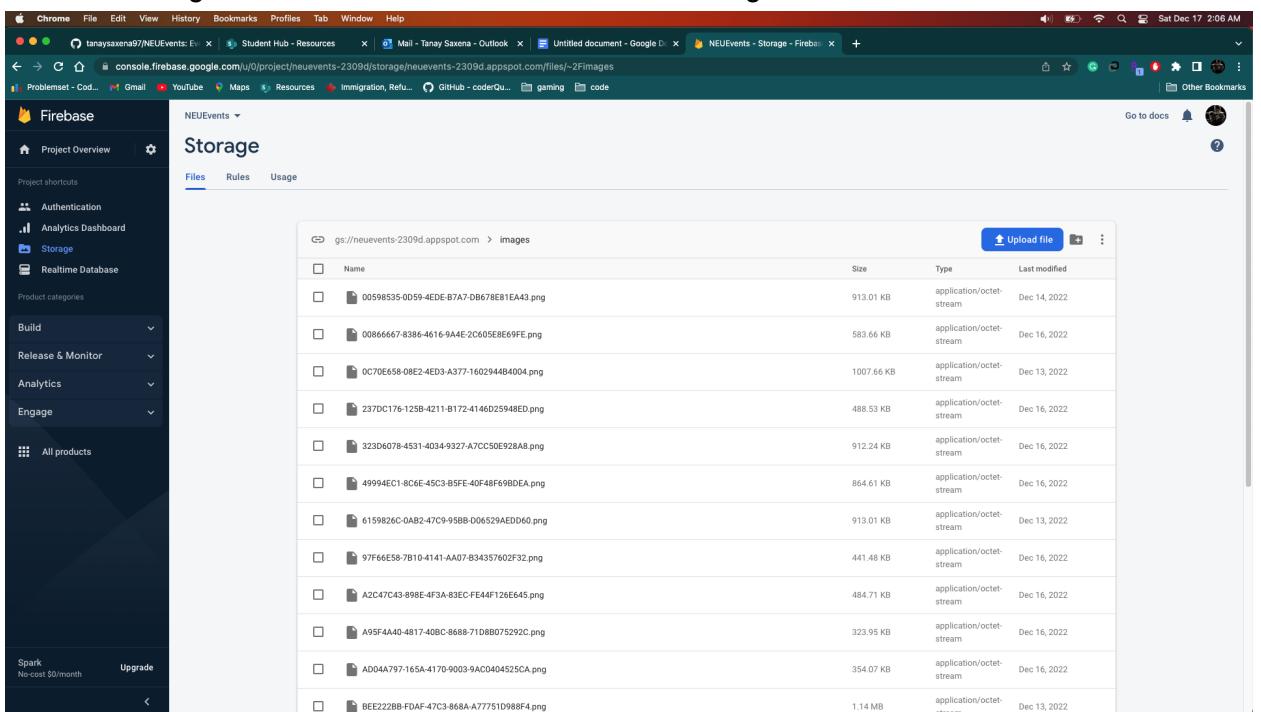
# Design

- Authentication and Authorization are handled by google sign in via Firebase



The screenshot shows the Firebase Authentication console for the project "NEUEvents". The "Sign-in method" tab is selected. Under "Sign-in providers", the "Google" provider is listed with its status as "Enabled". There is also a section for "SMS Multi-factor Authentication" which is currently disabled.

- Firebase storage has been used to store and retrieve images



The screenshot shows the Firebase Storage console for the project "NEUEvents". The "Files" tab is selected, displaying a list of uploaded images. Each entry includes the file name, size, type, and last modified date.

Name	Size	Type	Last modified
00598535-0D59-4EDE-B7A7-0B678E81EA43.png	913.01 KB	application/octet-stream	Dec 14, 2022
00866667-8386-4616-9AAE-2C605E8E69FE.png	583.66 KB	application/octet-stream	Dec 16, 2022
0C70E558-08E2-4ED3-A377-1602944B4004.png	1007.66 KB	application/octet-stream	Dec 13, 2022
237DC176-125B-4211-B172-4146D2594BED.png	488.53 KB	application/octet-stream	Dec 16, 2022
323D6078-4531-4034-9327-A7CC50E928A8.png	912.24 KB	application/octet-stream	Dec 16, 2022
49994EC1-8C6E-45C3-B5FE-40F4BF9B0DEA.png	864.61 KB	application/octet-stream	Dec 16, 2022
6159826C-0A82-47C9-95BB-006529AED60.png	913.01 KB	application/octet-stream	Dec 13, 2022
97F66E58-7B10-4141-AA07-834357602F32.png	441.48 KB	application/octet-stream	Dec 16, 2022
A2C47C43-898E-4F3A-83EC-FE44F126E645.png	484.71 KB	application/octet-stream	Dec 16, 2022
A95F4A40-4817-40BC-8688-71D8B075292C.png	323.95 KB	application/octet-stream	Dec 16, 2022
AD04A797-165A-4170-9003-9ACD0404525A.png	354.07 KB	application/octet-stream	Dec 16, 2022
BEE222BB-FD4F-47C3-868A-A77751D988F4.png	1.14 MB	application/octet-stream	Dec 13, 2022

- Firebase real-time database has been used for Event data key-value store

The screenshot shows the Firebase Realtime Database console. On the left, the navigation sidebar includes 'Project Overview', 'Realtime Database' (selected), 'Storage', 'Analytics', 'Engage', and 'All products'. Below the sidebar are 'Spark' (No-cost \$0/month) and 'Upgrade' buttons. The main area is titled 'Realtime Database' with tabs for 'Data', 'Rules', 'Backups', and 'Usage'. A sub-tab 'Data' is selected, showing a list of events. The URL in the browser is https://neuevents-2309d.firebaseio.com/.json. The data structure under 'events' is as follows:

```

events
  0C6EA9C8-ADE6-46CD-A30C-1137538C0D33
    description: "oday's the day! Dress your best and join us for our end of semester celebration - and don't forget to bring a gift ($15 price cap) to participate in the raffle."
    id: "0C6EA9C8-ADE6-46CD-A30C-1137538C0D33"
    imagePaths: []
    name: "Winter Banquet"
    organiserEmail: "tjackson@gmail.com"
    startTime: "12/30/2022 18:00"
      30763F14-1AF3-4FED-B999-99A2EE501764
      47581E61-F752-4942-A397-FFB60C3A6A7C
      52E7C381-B5C3-48D8-8FD9-97CE294CCC82
      B054FBC1-B13B-4BBC-AA17-2B41A656AA4F
      C233299B-4399-455C-968E-AF412EFC0BA3
      D0FE64F6-8A14-4A39-8477-2E4978E99003
      E538D44F-C433-4E59-9FC7-9072EAFBF821
      ECE91CE8-DFE9-448F-859F-C837F560750E
      EF64B521-42EB-4A7C-88AD-C6A846FBFE83
      F103C45B-96C6-49C5-AC2A-1FEE39F337E
  
```

At the bottom of the main area, it says 'Database location: United States (us-central1)'.

- Asynchronous image loading is being handled by [Kingfisher](#).
- EventKit has been used for adding events to the user's calendar.

# Google Sign-in

The image displays two side-by-side screenshots of a mobile device screen, illustrating the Google Sign-in process.

**Left Screenshot:** Shows the Northeastern University homepage. The top navigation bar includes "Northeastern Events". Below the navigation bar is a large red seal of Northeastern University. The seal features a torch at the top, a scroll in the center with the Latin motto "LVX VERITAS VIRTUS", and the years "1898" on either side. A green button labeled "Sign in/Sing up" is visible at the bottom left.

**Right Screenshot:** Shows the Google Accounts sign-in page. The top bar shows the URL "accounts.google.com" and the time "2:42". Below the URL are "Cancel" and "Sign in with Google" buttons. The main content area is titled "Choose an account" and says "to continue to project-344999646530". It lists two accounts:

- Tanay Saxena** (tanay.saxena1997@gmail.com)
- TANAY SAXENA** (tyjackx@gmail.com)

At the bottom, there is a link to "Use another account". A note below the accounts states: "To continue, Google will share your name, email address, language preference, and profile picture with project-344999646530."

# NU Events

2:15

all music dance tech food

Search



Name: hollygaymarket  
Date: 12/17/2022 16:00



Name: Winter Banquet  
Date: 12/30/2022 18:00



Name: Interview Breakthrough Panel  
Date: 01/18/2023 16:00



Name: Protothon 2.0  
Date: 12/29/2022 18:10



Name: Coloring with cooper  
Date: 12/20/2022 15:00



Name: Husky Holiday open mic  
Date: 12/27/2022 18:20

NU Events

Boston Events

Settings

2:16

< Back

+



Pick images

Protothon 2.0

Start time:

Dec 29, 2022 6:10 PM

The much awaited Protothon 2.0 finale is here!!

Witness the top 10 teams, 3 fantastic judges and 1 keynote speaker to get your scoop of the product management scene at Northeastern University.

Book the limited and free tickets soon using the link in

Submit

NU Events

Boston Events

Settings

# Boston Events (Eventbrite)

2:20

all

music

dance

tech

food



2:20

< Back



Q Search



Name: Boston Tech Career Fair:  
Exclusive Tech Hiring Event  
Date: 2023-01-13  
Venue: Online, Boston, MA 02109



Name: FAVELA ENCANTADA @  
Candidar | Guestlist (Must Submit  
RSVP)  
Date: 2023-01-07  
Venue: 275 Tremont Street, Boston,  
MA 02116



Name: Detention 8PM: Stand-Up  
and \$4 Drinks (Friday and Saturday)  
Date: 2023-01-06  
Venue: 5 Callender Street, Cambridge,  
MA 02139



Name: AfroCity Afrobeats Brunch +  
Day Party | @W-Hotel Bos | 1p-7p  
Date: 2023-01-01  
Venue: 100 Stuart Street, Boston, MA  
02116

Boston Tech Career Fair: Exclusive Tech Hiring Event

Event Date: 2023-01-13

Venue: Online, Boston, MA 02109

Tech Career Fair focus on helping companies achieve their diversity and inclusivity initiative with more diverse non-traditional candidates



Name: VENU SATURDAYS (2 Rooms  
- Hip Hop & Latin)  
Date: 2023-01-07  
Venue: 100 Warrenton Street, Boston,

Buy Tickets



NU Events



Boston Events



Settings



NU Events



Boston Events



Settings

# Adding Event to Calendar

2:22

Back +



FAVELA ENCANTADA @ Candibar | Guestlist (Must Submit RSVP)

Event Date: 2023-01-07

Venue: 275 Tremont Street, Boston, MA 02116

FAVELA ENCANTADA | Guestlist (Must Submit RSVP)

Buy Tickets

NU Events

Boston Events

Settings

2:22

Cancel New Event Add

FAVELA ENCANTADA @ Candibar | Guestlist (...)

Boston

All-day

Starts Jan 7, 2023 12:00 AM

Ends Dec 17, 2022 2:22 AM

URL

FAVELA ENCANTADA | Guestlist (Must Submit RSVP)

# Searching

2:25

Pro

Cancel



Name: Protothon 2.0  
Date: 12/29/2022 18:10

2:25

Choco

Cancel



Name: The Chocolate Expo 2023  
Boston/Wilmington  
Date: 2023-01-29  
Venue: 99 Fordham Road, Wilmington, MA 01887



Name: Speaker series  
Date: 01/16/2023 15:00



Name: hollygaymarket  
Date: 12/17/2022 16:00



Name: generatenu  
Date: 12/17/2022 17:00



NU Events



Boston Events



Settings



NU Events



Boston Events



Settings

# Segmented Control

2:27



all music dance tech food



Search



Name: VENU SATURDAYS (2 Rooms - Hip Hop & Latin)  
Date: 2023-01-07  
Venue: 100 Warrenton Street, Boston, MA 02116



Name: DRIP FRIDAYS at HAVA Nightclub  
Date: 2023-01-06  
Venue: 246 Tremont Street, Boston, MA 02116



Name: ICON SATURDAYS  
Date: 2023-01-07  
Venue: 100 Warrenton St., Boston, MA 02116

2:27



all music dance tech food



Search



Name: The Chocolate Expo 2023  
Boston/Wilmington  
Date: 2023-01-29  
Venue: 99 Fordham Road, Wilmington, MA 01887



Name: ANY GIVEN SUNDAY  
Date: 2023-01-01  
Venue: 180 Lincoln Street, Boston, MA 02111



Name: Brunch on Sunday W/ TOI  
Date: 2023-01-01  
Venue: 180 Lincoln St., Boston, MA 02111



NU Events



Boston Events



Settings



NU Events



Boston Events



Settings

# Buy Tickets

2:40

2:40

◀ NEUEvents

Back

+

Hideout Comedy Fridays!

Friday, January 6, 2023 · 7:30 - 9pm EST



Hideout Comedy Fridays!

Promo Code

Enter code

Apply

General Admission

-

0

+

\$20.00

+\$2.85 Fee

Sales end on Jan 6, 2023

Event Date: 2023-01-06

Venue: 1 Union Street, Boston, MA 02108

Dinner, drinks, and comedy! All in the historic heart of Downtown Boston.

Table for 6 People (Must Order Food)

-

0

+

\$130.00

+\$9.54 Fee

Sales end on Jan 6, 2023

\$0.00

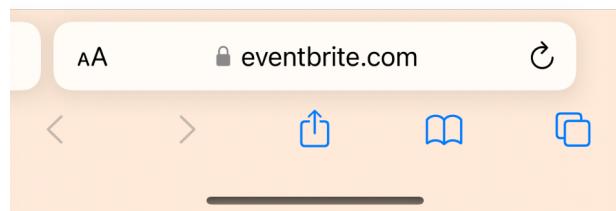
Check out

Buy Tickets

NU Events

Boston Events

Settings



## **Future scope**

- Deprecate the use of firebase and develop a custom middleware and scalable distributed database (3-tiered architecture) for more specialized features and scalability.
- Make the app public so that users around Boston can create events in order to remove dependence on Eventbrite.
- Recommendation system to provide tailored events based on user profiling.
- Targeted advertisement to generate revenue.
- Push notifications for real-time updates.

## **GitHub Repository**

<https://github.com/tanaysaxena97/NEUEvents>