Music, Technology, and Entrepreneurship Education for NYC K-12 Youth

Ingram Scholars Program, Aaron Li

Background

Since 1980, intergenerational economic mobility has declined and income inequality has increased. New York has the highest level of income inequality in the United States: the average income of the top 1% is over 44 times that of the bottom 99%. Although New Yorkers believe that education quality is critical to success, many New York schools are segregated. Despite 70% of all students being black or Hispanic, the top eight schools in the city black and Hispanic students only make up 11% of the student population. Education inequality has been exacerbated by the pandemic. Math and English scores for grades 5-8 dropped greatly, highlighting the impact of learning loss, which disproportionately impacts minorities.
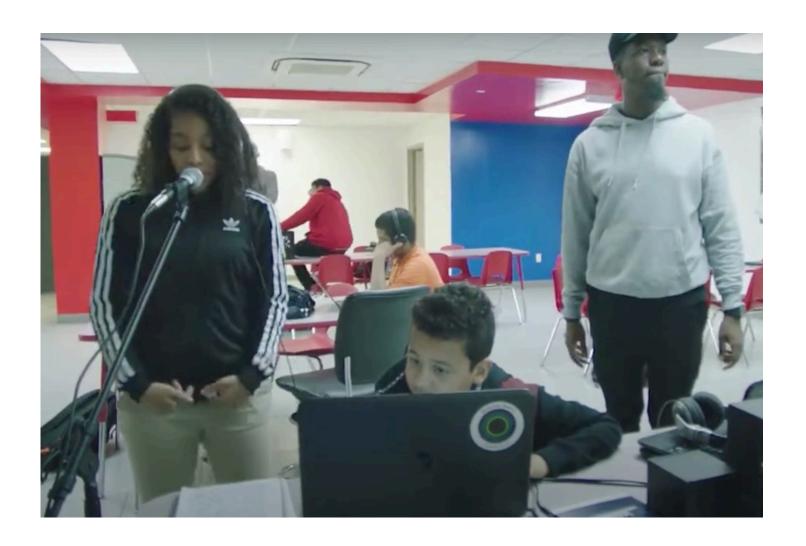
Why Building Beats

Building Beats is an education non-profit that conducts DJ, music production, and podcasting programs in the Bronx, Brooklyn, Manhattan, and Los Angeles. Since 2013, they have taught over 6,000 students with over 5,000 workshops. Through music education, Building Beats teaches students about technology, entrepreneurship, and leadership.

Building Beats has a mix of physical and online learning opportunities. They have in-school and after-school workshops and a toolbox that helps students get started remotely. They have rolled out an online curriculum and are seeking ways to digitize their resources effectively.

Building Beats's toolbox, a curated list of music resources, has 70,000 monthly visitors with no promotion. Building Beats has heard from students about how they want to continue attending workshops but do not have the means to go after school and leave home. However, many have access to a computer through their parents. To help, Building Beats has launched online courses that help students learn asynchronously about production in a structured manner. Building Beats asked me to help direct some of the students interested in the toolbox and further music education to their free online courses.

Daniel Aaronson and Bhashkar Mazumder, "Intergenerational Economic Mobility in the United States, 1940 to 2000," The Journal of Human Resources 43, no. 1 (2008): 139-72."
David R. Jones, "Unequal Education in New York's Public School System," La Nueva Mayoria, May 29, 2014.
J. E. Guthrie and S. C. Woods, "Pandemic Effects on Student Attendance and Achievement during the 2020-21 School Year: Trends from Six Tennessee Districts," Tennessee Education Research Alliance, July 2022.
Our Vision," Building Beats, accessed January 5, 2024, https://buildingbeats.org/who-we-are.

Project Description

The summer project was centered around building a student-friendly portal that connected students to courses of their level. This website was coded from scratch to include course banners, advanced filtering, and customized themes that Squarespace, their existing website builder, did not support. I also created interactive designs for students to interact with and conducted user interviews with students in their in-person workshops.

The project is poised to create long-term impact as it connects underserved students with music education and increase accessibility. The economically disadvantaged students that Building Beats works with can now learn on their own terms with the effective curriculum that Building Beats provides. Additionally, the UI/UX design notes I took will help Building Beats create more student-friendly experiences. The insights into students' preferred design will help Building Beats adapt its courses to be as engaging and personalized as possible. I also created documentation to make the website adaptable to staff preferences. I developed videos and guides with exact code line changes in case of errors to reduce potential technical debt.

Purpose
Learn how to edit the website from scratch.

Step 1: Create a GitHub account
GitHub is a website to edit and store code. To edit the website, you need to create a GitHub account.

Official sign-up instructions
1. Go to github.com
2. Click sign up
3. Follow the prompts to create your personal account
   a. Verify the email address

Video Guide

Step 2: Edit the GitHub repository
1. Navigate to the GitHub repository:
   https://github.com/aaronli04/buildingbeats/blob/main/src/utils/constants.ts
   a. This is the file that contains all the features of the website. You can change the text and links here!
2. Click the edit pencil icon in the upper right corner
3. Change the fields you want to directly
   a. Courses
      i. All Courses - bank of all courses
         1. Make sure to put commas in between closed squiggly brackets
            a. E.g. {}, {} not {} {} if you decide to reorder courses
            b. Close all fields with double quotes ""
               i. E.g. "X", not X
      ii. Trending Courses - which (3) courses you want listed first
      iii. Course