

Brian Pak

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EDUCATION

Georgia Institute of Technology | Atlanta, GA

Expected: May 2024

B.S – Computer Science, Concentrations: Intelligence & Media

Coursework: Data Structures & Algorithms (Java & C++), Software Design, Information Visualization, Computer Organization & Programming, Object-Oriented Programming, Discrete Math, Combinatorics

SKILLS

Languages: Java, JavaScript, HTML/CSS, Typescript, SQL

Frontend: Git, React, Next.js, DynamoDB, AWS Lambda, Axios, Serverless Stack Toolkit (SST), Spring Boot, Tailwind CSS, REST APIs

EXPERIENCE

GT Robotic Musicianship Lab | Student Software Developer

January 2023 - Present

- Rebuilt the user interface from deprecated Vue to **React** for the web-interface of Mixboard, a mobile app that combines multiple Spotify tracks.
- Included **HTML Drag & Drop API** to facilitate moving Spotify tracks across the interface for combining song tracks.
- Leveraged **Next.js** to provide server-side rendering techniques, improving Search Engine Optimization and load times.

PROJECTS

Spotify Jukebox | *Next.js, Axios, DynamoDB, AWS Lambda*

August 2022 - Present

- Spearheaded the implementation of 7 RESTful API endpoints with **AWS Lambda**, providing users with the ability to play songs **Spotify Web API**.
- Maintained real-time data of ‘up-votes’ and ‘down-votes’ of jukebox song queues with **WebSockets API**.
- Implemented **OAuth** Authorization Code Flow with PKCE to securely verify a host user’s Spotify account before beginning a music session.
- Constructed proof of concept for the interface using **Chakra UI**, providing users with an improved experience with adding/removing songs from the jukebox queue.

BuzzConnect | *Spring Boot, React, SQL*

August 2022 - December 2022

- Developed a full-stack **React** application in an **Agile** development process to assist students in exploring current student events on Georgia Tech’s campus.
- Headed the development of a RESTful API with over 15 endpoints using **Spring Boot**, allowing successful transfer of user and event data.
- Modeled relationships between 4 functional classes using **Spring Boot JPA**, allowing the development team to easily maintain and store data in a local **MySQL** database.
- Leveraged GT Places through **Axios** HTTP client to relate events to locations throughout Georgia Tech’s campus.

EXTRACURRICULARS

GT WebDev Club | Project Co-Lead - Spotify Jukebox

August 2022 - Present

- Migrated the application’s user interface to **Next.js** to leverage server-side rendering techniques when presenting song queue updates.
- Directed a team of 6 developers expanding the app’s **REST API** to manage user & music-session data while interacting with **Spotify Web API**.
- Conducted over 4 peer code reviews and walkthroughs, identifying potential optimizations and software bugs.