

# Brian Pak

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## EDUCATION

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**Georgia Institute of Technology** | Atlanta, GA

Expected: May 2024

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

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

## SKILLS

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**Languages:** Java, JavaScript, Typescript, HTML5, CSS

**Technologies:** React, Next.js, Git, Node, Chakra UI, DynamoDB, AWS Lambda, Spring Boot, REST APIs

## EXPERIENCE

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**GT Robotic Musicianship Lab** | Student Software Developer

January 2023 - Present

- Reconstructed the user interface from deprecated Vue to **React** for the web-interface of Mixboard, a mobile app that provides users with the ability to combine multiple song tracks.
- Integrated **HTML Drag & Drop API** to enable seamless movement of Spotify tracks when combining songs across the web interface.
- Developed the initial user interface using **Chakra UI**, enabling stakeholders to swiftly visualize the new interface and provide valuable feedback.

## PROJECTS

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**Spotify Jukebox** | *Next.js, DynamoDB, AWS Lambda, WebSockets API*

August 2022 - May 2023

- Headed the construction and deployment of the app's **RESTful API** using **AWS Lambda**, resulting in secure management of jukebox data within the app's **DynamoDB** database.
- Enabled real-time updates of 'up-votes' and 'down-votes' for jukebox song queues by building a **WebSockets API** on **Amazon API Gateway**.
- Migrated the application's user interface to **Next.js**, leveraging server-side rendering techniques to reduce page-load times by 44%.
- Implemented **OAuth** Authorization Code Flow with PKCE Extension to securely verify a host user's Spotify account before beginning a music session.

**BuzzConnect** | *Spring Boot, React, SQL*

August 2022 - December 2022

- Developed a full-stack **React** application in an **Agile** development process to inform students about ongoing 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

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**GT WebDev Club** | Project Co-Lead - Spotify Jukebox

August 2022 - Present

- Onboarded 10 student developers by providing expert guidance on our project's tech stack through three organized workshop-driven flow sessions, resulting in a 50% reduction in expected onboarding time.
- Directed three developers in implementing payment functionality into the app's **REST API** using the **Stripe API**, providing a revenue stream for the app.
- Collaborated with 3 UI designers to conceptualize and build a new design for the app using **Radix UI**, producing a refreshed and modernized user interface that was well-received by over 50 users.