# Brian Pak

bpak7@gatech.edu · brianpak.me · github.com/brianpak2402 · linkedin.com/in/brianpakk · 678-641-5035

## EDUCATION

**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

**Languages**: Java, JavaScript, Typescript, HTML, CSS, SQL
**Technologies**: React, Next.js, Git, Node.js, Chakra UI, DynamoDB, AWS Lambda, Spring Boot, REST APIs

## EXPERIENCE

**GT Robotic Musicianship Lab** | Student Software Developer                         January 2023 - Present
- Reconstructed the user interface from deprecated Vue to **React Typescript** 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 user interface using **Chakra UI**, enabling stakeholders to swiftly visualize the new interface and provide valuable feedback.

## PROJECTS

**Spotify Jukebox** | *Next.js, React Typescript, DynamoDB, AWS Lambda*             August 2022 - May 2023
- Constructed over 17 RESTful API endpoints through **Amazon API Gateway** and **Node.js** to manage user and virtual jukebox data on a **DynamoDB** database.
- Introduced over 11 automated unit test suites using **Playwright** and **Vitest** to support the application's CI/CD pipeline, helping detect errors in new pull requests.
- Migrated the application's user interface to **Next.js**, leveraging server-side rendering techniques to reduce page-load times by 9%.
- 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
- Spearheaded the development of the application's 20 RESTful API endpoints using **Spring Boot**, allowing successful transfer of user and event data.
- Provided a responsive design to the user interface by applying **CSS Container Queries** to the application's 4 webpages, allowing the UI to fit any screen.
- Modeled relationships between 4 functional classes using **Spring Boot JPA**, allowing the development team to easily maintain and store data in a local **MySQL** relational database.
- Leveraged the GT Places API through **Axios** HTTP client to help events to locations throughout Georgia Tech's campus.

## EXTRACURRICULARS

**WebDev @ GT** | Engineering Manager - Spotify Jukebox                              August 2022 - Present
- Directed a team of 10 student developers to redesign the application's RESTful & Websockets APIs on **API Gateway** to achieve a 30% improvement in the speed of updates to jukebox song queues.
- Collaborated with 3 UI designers to conceptualize and build a new design for the app using **Radix UI**, producing a modernized user interface that was well-received by over 35 users.
- Enforced an Agile development process to effectively design and build over 9 new features/improvements for the application.