# Brian Pak

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## EDUCATION

**Georgia Institute of Technology** | Atlanta, GA                                             Expected: May 2024
*B.S – Computer Science, Concentrations: Intelligence & Media*                                        *GPA: 3.42*
**Coursework**: Data Structures & Algorithms, Design & Analysis of Algorithms, Computer Graphics, Information Visualization, Computer Organization & Programming, Object-Oriented Design

## EXPERIENCE

**Ridgeline** | Software Engineering Intern                                             June 2023 - August 2023
- Prototyped a GraphQL-based trade alert notification service with Amazon SNS and AWS Lambda to support over 600 traders when tending to over $2 million in critical transactions.
- Deployed over five scalable APIs for maintaining sound effects and alert preferences using AWS S3, Amazon RDS, and Python, currently in use to scale the notification service to the entire application.
- Constructed the user interface for the application's trade notification settings page using React and Typescript, resulting in a seamless user experience and streamlined customization of alert preferences.

**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 - Current
- 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.

## SKILLS

**Languages**: Python, Typescript, HTML, CSS, Javascript, Java, SQL
**Technologies**: React, Next.js, Git, Node.js, Chakra UI, DynamoDB, GraphQL, AWS Lambda, AWS S3, AWS RDS, Amazon SNS, REST APIs