Brian Pak

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EDUCATION

Georgia Institute of Technology | Atlanta, GA   Expected: May 2024
B.S – Computer Science, Concentrations: Intelligence & Media   *GPA: 3.56*

Coursework: Data Structures & Algorithms, Design & Analysis of Algorithms, Machine Learning, Computer Animation,Information Visualization, Object-Oriented Design

EXPERIENCE

Ridgeline | Software Engineer Intern   June 2023 - August 2023
- Prototyped a GraphQL-based alert notification service with Amazon SNS and AWS Lambda to support over 600 traders when tending to over $2 million in financial transactions.
- Deployed six scalable APIs for maintaining preset sound effects and alert preferences using AWS S3, Amazon RDS, and Python.
- Architected the initial UI for the application's trade notification settings page using React Typescript, resulting in a seamless user experience and streamlined customization of alert preferences.

GT Center for Music Technology | Student Software Developer   January 2023 - Present
- Reconstructed the user interface from deprecated Vue to React Typescript for the web client of Mixboard, a mobile app hosting AI-generated music mashups.
- Designed and realized an audio scheduling algorithm using the Web Audio API to generate and deliver audio mashups to a global network of 200 beta testers.
- Integrated HTML Drag & Drop API to enable seamless movement of Spotify tracks when combining songs across the web interface.
- Orchestrated a robust user authentication and session management system using Firestore and the Firebase Javascript SDK, safeguarding confidential user data.

PROJECTS

Rocola (Jukebox) | *Next.js, React Typescript, DynamoDB, AWS Lambda*   pluto-apps/rocola.it
- Launched a real-time music session management application for social events by constructing a Next app hosted on AWS.
- Architected the backing cloud infrastructure with DynamoDB and AWS Lambda, hosting over 20 cloud-based APIs.
- Revamped the application's user interface to Next.js framework, leveraging server-side rendering techniques to reduce FCP scores and other performance metrics by 23%.
- Secured user authentication with 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*   brianpak2402/BuzzConnect
- 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
Technologies: React, Next.js, Git, Node.js, Chakra UI, DynamoDB, GraphQL, AWS Lambda, AWS S3, AWS RDS, Amazon SNS, REST APIs