Brian Pak

bpak7@gatech.edu · github.com/brianpak2402 · linkedin.com/in/brianpakk · Atlanta, GA

Education

Georgia Institute of Technology | Atlanta, GA — Expected Graduation: May 2024
B.S – Computer Science, Concentrations: Intelligence & Media — *GPA: 3.12*

Coursework: Data Structures & Algorithms (Java & C++), Information Visualization, Computer Organization & Programming, Object-Oriented Programming, Intro to AI, Intro to Robotics & Perception, Combinatorics

Experience

GT WebDev | Student Software Developer — *August 2022 - Current*

- Led the API development team to develop full-stack, serverless app to guide over 70 Georgia Tech students in enjoy music with a virtual jukebox.
- Spearheaded the implementation of the Authentication Flow with PKCE Extension with **Axios** and **AWS Lambda**, allowing a user-specific access token to be securely stored in **DynamoDB** for later use.
- Designed the Authentication Flow and Search for Songs functionality by composing two Technical Design Documents, informing other team members about its uses and potential challenges.
- Maintained real-time data of 'up-votes' and 'down-votes' of certain songs/albums using **WebSockets API**, allowing many people to interact with a music session simultaneously.

Projects

BuzzConnect | *React, Spring Boot, SQL, Maven* — *August 2022 - Current*

- Collaborated with four peers to design and develop a full-stack application that assists students in exploring current student events on Georgia Tech's campus.
- Designed and maintained a RESTful API with over 15 endpoints using **Spring Boot Web**, allowing successful transfer of user and event data.
- Modeled relationships between four different functional classes using **Spring Boot JPA**, allowing the development team to easily maintain and store data in a local **MySQL** database.

Unix Utilities | *C* — *June 2021 - August 2021*

- Implemented a collection of 8 **Linux/UNIX** command-line commands, including head, tail, env, and wc.
- Employed **C Standard Library** Functions to make system calls to the Linux Kernel, allowing the implementation work directly with the device's operating system.

Stranger Things Showdown! | *C* — *June 2022 - August 2022*

- Programmed a Stranger Things-themed rock, paper, scissors video game for the GameBoy Advance, hosted on an emulator provided through a Docker container.
- Encoded graphics for 7 Stranger Things characters and background scenery into the game by manipulating Direct Memory Access functions and implemented game logic using **C programming**.

Extracurriculars

The Agency at Georgia Tech | Member — *January 2022 - May 2022*

- Implemented a deep neural network of three layers in **Python** that interprets over 10,000 handwritten digits MNIST data to understand fundamental deep learning concepts and basics to ML Libraries.
- Attended lecture meetings to gain awareness about other AI subfields of interest such as Reinforcement Learning, Machine Learning Theory, and Computer Vision.

Skills

Languages: Java, JavaScript, HTML/CSS, C, C++, SQL, Python
Technologies: Git, React.js, Spring Boot, Axios, MySQL