Jason C. Gao

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EDUCATION

Georgia Institute of Technology

Master of Science, Human Computer Interaction   August 2024 – May 2026

Bachelor of Science, Computer Science   August 2019 – May 2023
Minor in Music Technology
Cumulative GPA: 3.91

SKILLS

Languages: TypeScript, JavaScript (React.js, Node.js, express.js), Python, Java, C#, SQL, HTML, CSS
Tech: AWS, Git, Docker, MySQL, Elasticsearch, Linux, Figma, Adobe Creative Suite, APIs (REST, GraphQL), Jira

WORK EXPERIENCE

Software Engineering Intern – American Gaming Systems   May 2024 – August 2024
- Designed, wireframed, and developed an AI asset generation tool for streamlining the game design prototyping process.
- Developed a unified Node.js TypeScript library for wrapping OpenAI DALL-E and Stable Diffusion image generation, prompt engineering, and image editing.
- Deployed Node.js back-end server and REST API for allowing React.js front end to use image generation functionality.

Freelance Full Stack Developer – RM Speaking Inc.   August 2023 – October 2023
- Developed and deployed a TypeScript React.js app using AWS Amplify that transforms user-uploaded videos into music videos by procedurally generating audio based on content detected with computer vision.
- Deployed on cloud infrastructure using EC2 server instances, AppSync GraphQL API, with data stored using S3.

Back End Developer Intern – IBM   June 2022 – August 2022
- Developed a full stack app displaying a knowledge graph of system error logs for faster error tracing.
- Deployed an OrientDB graph database queried using SQL for rapid access to log relationship data..
- Deployed an ElasticSearch NoSQL document database using Lucene queries to retrieve all user-generated error log data within specified timeframes and parameters.
- Built a REST API for front end to database communication using express.js in Node.js.
- Developed a React.js front end based on IBM component libraries to streamline visual navigation of log relationships..

Research Assistant – Institute for People and Technology @ Georgia Tech   June 2021 – May 2022
- Used C# to develop a testing interface for a study on using Augmented Reality to help focus in distracting scenarios.

PROJECTS

Spotify Karaoke   November 2023 – February 2024
- Designed a front end using TypeScript, React.js, and styled-components to allow users to seamlessly search Spotify songs and display generated smooth scrolling karaoke tracks.
- Developed Python ETL data pipeline to extract and standardize data from multiple sources including Spotify metadata, YouTube videos, and a Lyrics API before loading into Amazon S3 cloud storage as a data lake.
- Deployed on AWS cloud architecture using EC2 virtual servers running Docker containers managed with ECS container management, with GraphQL API deployed using AWS AppSync for rapid access to stored data.
- Automatically generates word-synchronized karaoke tracks using OpenAI's Whisper speech-to-text transcription and Deezer's Spleeter source-separation Python libraries, and a custom dynamic programming based alignment algorithm.