

# DAVID TAN

## Software Engineer

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**SKILLS:** React, Redux, Ruby on Rails, PostgreSQL, JavaScript, TypeScript, Ruby, SQL, HTML, CSS, Firebase, MongoDB, Node.js, Express.js, AWS S3, WebSocket, Material UI, jQuery, Git, TDD

### RELEVANT EXPERIENCE:

**Sopra.ai**, *Part-Time Software Engineering Intern, Remote* Nov 2023 - Present

- Revamped frontend for a web app using TypeScript, React, and Material UI following Figma designs and Agile methodologies, enabling content creators to craft AI-driven personas
- Constructed voice feature functionality which includes speech recognition for prompts to the AI and voice synthesis for text-to-speech of the response
- Collaborated in a small team to resolve a critical backend blocker by effectively debugging Retrieval-Augmented Generation node storage and retrieval issues

**Freelance**, *Full Stack Software Engineer, Remote* Oct 2023 - Present

- Crafted and launched a Twitch-integrated racing game, driving engagement and retention
- Implemented a chat command system for viewer participation featuring personalized vehicles
- Streamlined artwork submission for customized vehicle designs, fostering Twitch community
- Successfully conducted 150 bug-free games on alpha release with 100+ unique users

**Scale AI**, *Part-Time AI Testing Engineer, Remote* Aug 2023 - Present

- Provided essential human feedback for the reinforcement learning process of a large language model, contributing to its continuous improvement and enhanced performance
- Created JavaScript prompts to improve the model's code explanation and debugging abilities
- Identified and communicated improvements for AI responses, enhancing overall model quality

### PROJECTS:

**Davescord** - React, Redux, Ruby on Rails, JavaScript, PostgreSQL, AWS, WebSocket [live](#) | [github](#)  
*A chat application inspired by Discord*

- Built a custom RESTful API using a Ruby on Rails backend communicating with a PostgreSQL database via ActiveRecord queries
- Incorporated WebSockets for real-time messaging between users on mutual servers as well as AWS S3 for image hosting of custom user profile pictures and server icons

**Itinerator** - MongoDB, Express, React, Node.js, JavaScript (ES6), HTML5, CSS3 [live](#) | [github](#)  
*A single page web application where users can build an itinerary of activities within close proximity*

- Securely stored hashed user information in a MongoDB database using the BCrypt library
- Employed Redux to manage frontend state changes to minimize fetch requests and to prevent unnecessary rerenders while users navigate the app
- Integrated Google Maps API to allow users to explore activity options on an interactive map

### EDUCATION:

**Georgia Institute of Technology**, Atlanta, GA Dec 2019  
Ph.D. in Mechanical Engineering (all but dissertation), 4.00 GPA

**The Cooper Union for the Advancement of Science and Art**, New York, NY May 2014  
Bachelor of Engineering (BE) in Mechanical Engineering, 3.64 GPA