

# RICHARD SO

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## EDUCATION

### Georgia Institute of Technology

College of Computing — Bachelor of Science in Computer Science

August 2021 – May 2024

Atlanta, GA

- Threads: Intelligence & People; GPA: 4.0

## SKILLS

**Programming Languages** | Java, Python, JavaScript, TypeScript, MATLAB, SQL, C/C++

**Frameworks & Libraries** | Vue, Nuxt, Angular, Flask, Electron, NumPy, Pandas, Matplotlib, PyTorch, XGBoost

**Technologies** | Git, Vim, REST, Firebase, PostgreSQL, SQLite, Teradata, Salesforce, CRM Analytics

**Relevant Coursework** | Java OOP, Data Structures & Algorithms, Computer Organization, Objects & Design

## EXPERIENCE

### Union Pacific Railroad

Software Development Intern

May 2022 - August 2022

Omaha, NE

- Leveraged Salesforce CRM Analytics to generate rail shipment pricing XGBoost models with up to 99% accuracy.
- Decreased the error margin of price estimations by 31% versus an existing 3<sup>rd</sup> party pricing analytics solution.
- Created an Angular web application to fetch price predictions from the Salesforce Einstein Prediction Service API.

### EPIC Lab - Georgia Institute of Technology

Undergraduate Research Assistant

January 2022 - Present

Atlanta, GA

- Analyzed experimental data using Matlab in a project to optimize hip exoskeleton controls for human movement.
- Programmed a pipeline for multi-dimensional data collected from EMG and metabolics measurement sensors.
- Maintained a codebase to visualize muscle activity and metabolic cost differences between trial conditions.

### Brooklyn College CUNY

Researcher

July 2019 - September 2021

Brooklyn, NY

- Performed research on machine learning applications under Dr. Michael I Mandel at Brooklyn College CUNY.
- Optimized an existing bird audio detection model to be over 90% accurate using the PCEN audio preprocessor.
- Utilized foreground segmentation techniques to automatically predict the presence of animals in image data.
- Familiarized with data wrangling and visualization approaches using the Pandas and Matplotlib Python libraries.

### Staten Island Technical High School

Computer Science Curriculum Designer

June 2021 - August 2021

Staten Island, NY

- Curated a collection of course materials (lessons & exercises) for the school's Computer Science courses.
- Developed multiple project tracks to solidify industry-standard HTML, CSS, and JavaScript skills for students.
- Expanded the existing curriculum to include the MEVN (MongoDB, Express, Vue, NodeJS) technology stack.

## PROJECTS

### eyePause Desktop Application Utility | TypeScript, Electron

July 2022

- Engineered a desktop application to track screen time and assist users in taking regular breaks from the device.
- Developed using the Electron framework and TypeScript language under the hood.

### Staten Island Solar Car Telemetry System | C++, PlatformIO, SQLite

June 2021

- Implemented a real-time solution to track and transmit solar car vital data to a local database.
- Programmed microcontrollers to manage multiple hardware modules (GPS, LoRa Radio, LCD, & ADC).

### Full-Stack Recipe Sharing Application | JavaScript, Nuxt, Firebase

May 2021

- Constructed a server-side rendered application for users to post and view food recipes using Nuxt.
- Binded Firebase Authorization, Cloud Firestore, and Storage services to a frontend interface.

## AWARDS & ACHIEVEMENTS

- Co-Author of a [2020 IEEE ICASSP conference paper](#) featuring my research on ML for bird audio detection.
- Cultivated over 500,000 viewers of my technology/programming blog on [Medium](#).
- Winner of the [Milton Fisher Scholarship for Innovation and Creativity](#).
- 1<sup>st</sup> Award Winner of the 2020 TNYC STEM Fair.