Richard So

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Education

Georgia Institute of Technology **August 2021 – May 2024**
College of Computing — B.S. in Computer Science *Atlanta, GA*

- Threads: Intelligence & People; GPA: 4.0

Skills

Programming Languages | Java, Python, JavaScript, TypeScript, MATLAB, SQL, C/C++
Frameworks & Libraries | Vue, React, Angular, Flask, Electron, NumPy, Pandas, Matplotlib, PyTorch, XGBoost
Technologies | Git, Vim, REST, CMake, Firebase, MongoDB, PostgreSQL, SQLite, Teradata, Salesforce
Relevant Coursework | Java OOP, Data Structures & Algorithms, Computer Organization, Objects & Design

Experience & Research

Union Pacific Railroad **May 2022 - August 2022**
Software Development Intern *Omaha, NE*

- Leveraged Salesforce CRM Analytics & XGBoost to generate rail shipment pricing models with up to 99% accuracy.
- Decreased the error margin of price estimations by 31% versus an existing 3rd party pricing analytics solution.
- Created an Angular web application to query/fetch price predictions from the Einstein Prediction Service API.
- Strengthened team collaboration and effective demonstration abilities under an Agile workflow environment.

EPIC Lab - Georgia Institute of Technology **January 2022 - Present**
Undergraduate Research Assistant *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 **July 2019 - September 2021**
Researcher *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.
- Co-Author of a 2020 IEEE ICASSP conference paper featuring my research on ML for bird audio detection.
- Utilized foreground segmentation techniques to automatically predict the presence of animals in image data.

Staten Island Technical High School **June 2021 - August 2021**
Computer Science Curriculum Designer *Staten Island, NY*

- Curated 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-on 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 Arduino 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.js.
- Binded Firebase Authorization, Cloud Firestore, and Storage services to a responsive frontend interface.

Awards & Achievements

- Cultivated over 500,000 viewers of my technology/programming blog on Medium.
- Winner of the Milton Fisher Scholarship for Innovation and Creativity.
- 1st Award Winner of the 2020 TNYC STEM Fair.