Richard So

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Education

Georgia Institute of Technology 08/2021 – 05/2025
B.S./M.S in Computer Science (Interactive Intelligence) — GPA: 4.0 *Atlanta, GA*
- Relevant Coursework: Java OOP, Data Structures, Computer Organization, Algorithms Honors, Artificial Intelligence

Skills

Programming Languages | Python, JavaScript/TypeScript, Go, C/C++, MATLAB, Java
Frameworks / Libraries | Vue, React, Angular, NumPy, Pandas, Matplotlib, Scikit Learn, PyTorch, Keras
Technologies | Git, Vim, REST, Firebase, RDBMS (SQL), Salesforce CRM, LaTeX

Work Experience

Tanium 06/2023 – 08/2023
Software Engineer Intern *Kirkland, WA (Remote)*

College of Computing — Georgia Tech 01/2023 – Present
Teaching Assistant *Atlanta, GA*
- Led sections of a 50-student cohort in the course instruction of CS 2110: Computer Organization & Programming.
- Lectured biweekly on the foundations of computer architecture, datapath tracing, LC-3 assembly, and the C language.
- Aided 800+ students in course material and assignment debugging via office hours and student Q&A forms.

Union Pacific Railroad 05/2022 – 08/2022
Technology Intern *Omaha, NE*
- Deployed an internal tool to simulate prices for hypothetical shipments based on past trends; actively used by sales team.
- Designed ML regression models for such price simulations/estimations using Salesforce CRM Analytics and XGBoost.
- Performed rigorous feature engineering on historical shipment datasets to maximize model accuracy up to 97% and decrease error margins of estimations by 31% versus UP's existing pricing analytics solution.

Exoskeleton Prosthetic Intelligent Controls (EPIC) Lab — Georgia Tech 01/2022 – Present
Undergraduate Research Assistant *Atlanta, GA*
- Managed and analyzed data across 400+ experimental trials to discover optimal human exoskeleton torque assistance profiles.
- Automated a data pipeline for collected physiological signals into MATLAB structures for convenient access and distribution.
- Optimized data loading for a machine learning (CNN) gait phase estimator to be 60x faster with Numpy vectorization.

Research Foundation of The City University of New York (CUNY) 07/2019 – 12/2021
Independent Researcher *Brooklyn, NY*
- Performed research on audio and vision deep learning applications under Dr. Michael I Mandel.
- Refined an existing bird audio detection model to be over 90% accurate using the PCEN audio preprocessor.
- Utilized foreground segmentation techniques to predict and automatically annotate animal presence in image data.
- Co-Author of a 2020 IEEE ICASSP conference paper featuring my research on ML for bird audio detection.

Projects

LC-3 Program Assembler and Simulator | *Go, Assembly, Little Computer 3*
- Built a computer simulator in Golang that executes object files, satisfying nearly all specifications of the LC-3 ISA.
- Assembler supports syntax error checking and conversion from LC-3 assembly into object (binary) executables.

Solar Car Telemetry System | *C++, PlatformIO, SQLite*
- Prototyped a real-time solution to measure and transmit vital statistics of a solar car to a local SQLite database.
- Programmed microcontrollers for precise communication between multiple hardware modules (GPS, ADCs, LoRa Radio).

Achievements

- Cultivated 500,000+ viewers and 900+ followers of my technology/programming blog on Medium.
- Winner of the 2021 Milton Fisher Scholarship for Innovation and Creativity.
- 1st Award Winner of the 2020 Terra NYC STEM Fair.