

RICHARD SO

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EDUCATION

Georgia Institute of Technology

08/2021 – 05/2024

B.S. in Computer Science — 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

Incoming 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 data collection and analysis across two exoskeleton studies: ~20 subjects total, each with 16-20 experimental trials.
- 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.