Saron D. Samuel

✉ sdsam@stanford.edu   ⌂ saronsamuel.github.io

EDUCATION

Stanford University *September 2021 - Present*
BS in Computer Science, Minor in Biology GPA: 3.73/4.0
Advisor: Mehran Sahami

EXPERIENCE

Johns Hopkins Human Language Technology Center of Excellence *June 2024 - October 2024*
Visiting Research Scholar
Advisors: Eugene Yang

Stanford Natural Language Processing Group *March 2023 - June 2024*
Undergraduate Research Assistant
Advisors: Omar Khattab, Christopher Potts

Stanford Institute for Human-Centered Artificial Intelligence *June 2022 - January 2023*
Undergraduate Research Assistant
Advisor: Rob Reich

EMPLOYMENT

Stanford Residential Education *September 2024 - Present*
Residential Assistant

AfroWatch *November 2023 - Present*
Children's Educational Media Lead

PricewaterhouseCoopers *June 2023 - July 2023*
Products and Technology Consultant Intern

RESEARCH PROJECTS

* - equal contribution

1. **Prompts as Auto-Optimized Training Hyperparameters: Training Best-in-Class IR Models from Scratch with 10 Gold Labels**
   Jasper Xian, **Saron Samuel**, Faraz Khoubsirat, Ronak Pradeep, Md Arafat Sultan, Radu Florian, Salim Roukos, Avirup Sil, Christopher Potts, Omar Khattab
   Under Review, Conference Submission, arXiv:2406.11706, 2024.

2. **Fusion is All You Need: Modality Fusion for Multilingual Video Retrieval**
   Saron Samuel, Dan Degenaro, Jimena Guallar-Blasco, Kate Sanders, Seun Eisape, Tanner Spendlove, Arun Reddy, ..., Eugene Yang, Kenton Murray, Reno Kriz
   Under Review, Conference Submission, 2024.

3. **MuRST: Multilingual Recursive Summarization Trees**
   Tarini Mutreja*, **Saron Samuel***, Humishka Zope*
   CS224N Natural Language Processing with Deep Learning Final Project, Stanford University, 2024.

4. **Spellcheck, Autofill, and Word Generation for Afaan Oromoo and Other Languages**
   Saron Samuel
   2nd place CS109 Introduction to Probability for Computer Scientists Challenge Project, Stanford University, 2023.

PRESENTATIONS

- **Effective Communication for Engineers: Bridging the Gap Between Technical Knowledge and Collaboration**
  - NSBE Regional Leadership Conference 2024, Workshop *August 2024*
  - University of Southern California, Los Angeles, CA
- **Tutorials on ColBERT and DSPy**
  - Summer Camp for Applied Language Exploration *July 2024*
  - Johns Hopkins Human Language Technology Center of Excellence, Baltimore, MD
- **Toward Richer Retrieval Training Data: Building Re-Rankers in DSPy**
  - NLP Group Presentation *December 2023*
  - Stanford Department of CS, Stanford, CA
- **Exploring Training Neural Retrieval Models for Long Text and Code**
  - CURIS Poster Presentation *August 2023*

– Stanford Department of CS, Stanford, CA
- **Presenting with Impact: Communication Skills for Emerging Engineers**
  – NSBE Regional Leadership Conference 2023, Workshop   *August 2023*
  – Nike World Headquarters, Beaverton, OR

Awards and Honors

- Stanford Student Organization Leadership Award   *May 2024*
  Awarded for exceptional leadership and contributions to student-led initiatives at Stanford University. Recognized for impactful leadership in various roles that positively influenced the university community.

- Second Place, CS109 Introduction to Probability for Computer Scientists   *May 2023*
  Project Title: "Spellcheck, Autofill, and Word Generation for Afaan Oromoo and Other Languages." Awarded second place among around 50 submissions in the CS109 Challenge, recognized for exceptional creativity and mathematical rigor. The project involved surveying around 100 individuals to build a comprehensive dataset in order to develop effective language processing tools tailored specifically for Afaan Oromoo.

- VPUE STEM Fellow   *February 2023*
  Nominated and selected as part of the STEM Fellows Program funded by the Stanford Office of the Vice Provost for Undergraduate Education (VPUE). The fellowship supports students from diverse backgrounds pursuing research in STEM fields. Includes mentorship, research funding, and professional development.

- Jackie Robinson Foundation Scholar   *June 2021*
  One of 50 students selected nationwide for the Jackie Robinson Foundation Scholarship, awarded based on academic excellence, leadership, and dedication to community service. The scholarship includes up to $35,000 over four years and a comprehensive support program featuring mentorship, leadership development, and career guidance.

Leadership and Teaching

- **National Society of Black Engineers (NSBE) Region 6 Executive Board**   West Coast Region
  Secretary (2024–Present), Publications Chair (2023–2024)   *October 2021 – Present*
  – Lead the Communications Team, delivering presentations at universities and conferences to NSBE leaders on effective communication strategies.
  – Organized a summer leadership conference at Nike World Headquarters (2023) and the University of Southern California (2024), with approximately 90 attendees each, as well as two Fall Regional Conferences in San Jose (2023) and San Diego (2024), each attracting over 500 participants.

- **Black LaIR Tutor for Introductory Computer Science Courses**   Stanford, CA
  Program Coordinator (2022–2023)   *September 2022 – Present*
  – Provided tutoring support through the Black LaIR initiative for foundational computer science courses (*CS106A: Programming Methodology* and *CS106B: Programming Abstractions*), helping students from underrepresented backgrounds strengthen their understanding of core concepts.
  – Managed a $10,000 grant from the Computer Science Department for tutor honorariums.

- **Black in Computer Science at Stanford**   Stanford, CA
  President (2023–2024)   *September 2022 – August 2024*
  – Organized workshops featuring faculty, researchers, and industry professionals; launched a new Graduate School Series in collaboration with Stanford CS Admissions to support student career advancement.
  – Co-organized Breakthrough Demo Day, showcasing 19 minority founders and attracting around 100 investors.
  – Awarded the Student Organization Leadership Award from the Black Community Services Center and secured a grant of approximately $60,000 for organizational programming following my time as president.

Coursework

– CS238: Decision Making under Uncertainty
– CS224N: Natural Language Processing with Deep Learning
– CS161: Algorithm Design & Analysis
– CS139: Human-Centered AI
– CS111: Operating Systems Principles
– CS148: Computer Graphics and Imaging
– CS107E: Computer Systems from the Ground Up
– CS151: Logic Programming
– CS124: From Languages to Information
– CS145: Big Data Systems
– CS181: Computers, Ethics, and Public Policy