

Darren (Sizuo) Liu

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Education

Sichuan University

BE in Software Engineering

- GPA: 3.1/4.0

Sept 2017 – May 2021

Binghamton University

MS in Computer Science

- GPA: 3.45/4.0

Aug 2020 – Dec 2022

Metis

Associate Degree in Data Science and Machine Learning

Jun 2022 – Jan 2023

Emory University

PhD in Computer Science and Informatics

- GPA: 3.79/4.0
- **Track:** Biomedical Informatics

*Aug 2024 – May 2028
(Expected)*

Experience

Software Engineer Intern

Chinasoft International

- Full-stack web development for their employee management website.
- In charge of requirement analysis and database design.

*Chongqing, China
July 2020 – Aug 2020*

Part-time Recording Engineer, Songwriter, Producer

Silence Music

- In charge of chorus recording and vocal direction.
- In charge of composing and producing.
- Co-produced Yichuan Wang's album "Stop Daydreaming".
- Produced my albums "Murderer" and "DARREN".

*Chengdu, China
Mar 2020 – Aug 2024*

Information Analyst

Emory University

- Full-stack developing a React website – ModelMeetsData. It hosts machine learning models that allow users to test with their datasets and model owners to track their models' performance across different datasets.
- Leading the large language model project to evaluate large language models' performance in tagging clinical concepts detected by MetaMap from nursing notes.
- Full-stack developing a React Native mobile application – CRCWeb. It provides colorectal cancer patients with educational materials to help them with severe psychoneurological symptoms like fatigue, depression, sleep disturbance, and so on. It also collects sensor data from patients' phones to analyze patient activities and provide colorectal cancer patients with suggestions on their daily routine.
- Building a co-occurring token evaluation panel and a large language model outputs evaluation panel for annotators to perform corresponding annotations.
- Leading the large language and vision model for time-series data project to evaluate their performance in possessing pattern recognition for real-world physiological signals.
- Full-stack developing a React Native mobile application to provide patients with a visualization of their daily activities and their goals. Based on their daily activities, it will automatically provide the patients with new goals, and when they complete their goals, they will be rewarded.
- Full-stack developing a diet management application with a smart agent built inside to extract micro-

*Atlanta, GA
Mar 2023 – Jun 2024*

nutrition from food images to help people track their food intake and provide suggestions.

Data Scientist Intern

Nihon Kohden America

Irvine, CA

May 2025 – Aug 2025

- Developed and deployed a web-based real-time alarm analytics dashboard (previously deployed in Children's Healthcare of Atlanta) into the Nihon Kohden Digital Health Platform (NKDHP).
- Developed and deployed a receiver application that pulls data from a SQL server (Bedmaster), converts it into the NKDHP format, and sends it to the Kafka feed.
- Tested and Deployed the end-to-end system.

Publications

- (In Review) **NutriOrion: A Hierarchical Multi-Agent Framework for Personalized Nutrition Intervention Grounded in Clinical Guidelines** Wu, J
Yan, R, Luo, H, *Liu, D.*, Wang, M, Townsend, K, Hartwig, L, Milketinas, D, Hu, X, Yang, C Feb 2026
<https://arxiv.org/pdf/2602.18650> 
- DietAI24 As A Framework for Comprehensive Nutrition Estimation Using Multimodal Large Language Models** Yan, R, Luo, H, Lu, J, *Liu, D.*, Posluszny, H, Dhaliwal, M, MacLeod, J, Qin, Y, Yang, C, Hartman, T, Hu, X Nov 2025
<https://www.nature.com/articles/s43856-025-01159-0> 
- Leveraging Artificial Intelligence for Digital Symptom Management in Oncology: The Development of CRCWeb** *Liu, D.*, Lin, Y, Yan, R, Wang, Z, Bold, D, Hu, X July 2025
<https://cancer.jmir.org/2025/1/e68516> 
- Prediction of cardiac arrest in the pediatric cardiac intensive care unit: A time-series machine learning approach** Lu, J., Brown, S., Wu, Y., Dong, K., Bold, D, *Liu, D.*, Grunwell, J., Hu, X. Apr 2025
<https://www.sciencedirect.com/science/article/abs/pii/S0883944124004453> 
- Evaluation of Large Language Models in Tailoring Educational Content for Cancer Survivors and Their Caregivers: Quality Analysis** *Liu, D.*, Hu, X, Xiao, C, Bai, J, Lee, s, ..., Lin, Y Feb 2025
<https://cancer.jmir.org/2025/1/e67914> 
- 1444: Using Machine Learning to Predict Cardiac Arrest in the Pediatric Cardiac Intensive Care Unit** Brown, S. Grunwell, J. Wu, Y. Dong, K. Bold, D. *Liu, D.*, Fundora, M. Hu, X. Lu, J. Jan 2025
<https://journals.lww.com/ccmjournals/> 
- Perceptions and Needs for A Technology-Based Dyadic Intervention on Symptom Management Among Patients with Colorectal Cancer and Their Caregivers: A Qualitative Study** Epari, A., Kim, K., Xiao, C., Porter, L. S., Alese, O. B., Northouse, L., *Liu, D.*, Bold, D., Graetz, I., Lin, Y Sep 2024
<https://journals.lww.com/cancernursingonline/> 
- Evaluation of General Large Language Models in Understanding Clinical Concepts Extracted from Adult Critical Care Electronic Health Record Notes** *Liu, D.*, Ding, C., Bold, D., Bouvier, M., Lu, J., Jabaley, CS. ..., Hu, X. Jan 2024
arxiv.org/abs/2401.13588 

Conferences

Enabling Scalable Predictive Monitoring and Alarm Analytics via a Real-Time Platform for Processing Continuous Cardiorespiratory Monitoring Data November 2025
AMIA

<https://amia.secure-platform.com/symposium/gallery/rounds/82021/details/20357> [🔗](#)

Enabling Scalable Live Alarm Analytics: AlarmX October 2025
IEEE BHI

<https://bhi.embs.org/2025/> [🔗](#)

DietAI24: A Novel LLM-Based Dietary Assessment Software From Food Images May 2025
Nutrition 9

[https://cdn.nutrition.org/article/S2475-2991\(25\)02366-2/fulltext](https://cdn.nutrition.org/article/S2475-2991(25)02366-2/fulltext) [🔗](#)

Empowering Customized Data Annotation: Dynamic Forms May 2025
Bridge2AI/NIH

<https://bridge2ai.org/> [🔗](#)

Systematic Evaluation of General Large Language Models for Contextually Assessed Semantic Concepts From Unstructured Critical Care Data May 2024
ATS

https://www.atsjournals.org/doi/pdf/10.1164/ajrccm-conference.2024.209.1_MeetingAbstracts.A5060 [🔗](#)

Do General Large Language and Vision Models Possess Pattern Recognition Abilities for Real-World Physiological Signals? March 2024
MCBIOS

<https://2024.mcbios.com/program> [🔗](#)

Using Large Language Models to Tag Clinical Concepts Extracted from Nursing Notes October 2023
IEEE BHI

<https://bhi.embs.org/2023/wp-content/uploads/sites/97/2023/10/IEEE-BHI-2023-Program.v4.pdf> [🔗](#)

Skills

Programming Languages: Python, JavaScript, HTML, CSS, SQL, R, Java, C, C++

Technologies: React, React Native, Node.JS, Express.JS, MySQL, SQLite, MongoDB, Spring Boot, Flask, Machine Learning, Reinforcement Learning