

Nitish Nagesh

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EDUCATION

Ph.D. Computer Science, University of California Irvine, GPA: 3.90/4.0

September 2021 - December 2026

M.S. Computer Science, University of California Irvine, GPA: 3.83/4.0

September 2021 - June 2023

SKILLS

- Python, R, SQL, Tensorflow, Langchain, SciPy, Snowflake, Git, AWS

PROFESSIONAL EXPERIENCE

Graduate Research Scientist, UC Irvine Institute for Future Health, Irvine, CA

June 2022 - Present

- Build novel LLM-augmented causally fair synthetic data generation pipeline using Python, R to analyze bias in real-world health datasets; first-author publication in IEEE Medicine and Biology conference.
- Assisted in conceptualizing an LLM-powered framework for a diet recommendation chatbot using health data, achieving 92% effectiveness; co-authored publication in Elsevier Smart Health Journal.
- Integrated dietary guidelines and nutrition calculation tools into LLM-based health agents, enabling explainable diet risk assessments; co-authored publication in IEEE Medicine and Biology conference.

Research Data Scientist Intern, ResMed, San Diego, CA

June 2024 - September 2024

- Built LLM-powered topic modeling framework to analyze quantitative data for 6,000 sleep apnea patients using LLMs and Langchain in Python, improving therapy personalization.
- Collaborated with an interdisciplinary team of 5 researchers to refine product claims related to pressure and wakefulness in sleep apnea patients; first-author abstract in American Thoracic Society 2025.

Data Scientist Intern, iHealth Labs, Sunnyvale, CA

June 2023 - September 2023

- Led de-identification, aggregation, and analysis of data for 12,000 patients in a remote patient monitoring program, adhering to HIPAA guidelines, resulting in an academia-industry partnership.
- Collaborated with a cross-functional team to develop personalized interventions for diabetes and hypertension management; co-authored abstracts at American Heart & Diabetes Associations.

Applied Machine Learning Intern, Institute for Future Health, Irvine, CA

September 2021 - May 2022

- Implemented an image segmentation pipeline for a retina dataset using deep learning frameworks such as TensorFlow, Keras, SciPy achieving 31% accuracy for optic disk and 8% for fovea segmentation.
- Classified the Fashion-MNIST dataset using convolutional neural networks (CNN) in Python, achieving 95.88% training accuracy and 93% test accuracy after hyperparameter tuning and cross-validation.

Software Engineer, Qualcomm, Austin, TX

March 2021 - August 2021

- Developed a Python tool to parse 5,000 logs from the Qualcomm AI accelerator, reducing cycle time by 3x and lowering upstream production costs.
- Triaged and debugged failures in three ML accelerator SDKs through feature engineering and model evaluation, resulting in a 10% performance improvement across internal benchmarks.

RELEVANT PUBLICATIONS

- Nitish Nagesh, Salar Shakibhamedan et al. **"FairTabGen: Unifying Counterfactual and Causal Fairness in Synthetic Tabular Data Generation"**, Under Revision, 2025.
- Nitish Nagesh et al. **"FairCauseSyn: Towards Causally Fair LLM-augmented Synthetic Data Generation."**, IEEE Medicine and Biology Conference, Copenhagen, 2025.
- [Abstract] Nitish Nagesh et al. **"Assessment Of AI/ML Approaches For Qualitative Analysis In Obstructive Sleep Apnea"**, American Thoracic Society, San Francisco, 2025.
- Zhongqi Yang, Nitish Nagesh et al. **"ChatDiet: Empowering personalized nutrition-oriented food recommender chatbots through an LLM-augmented framework."**, Elsevier Smart Health, 2024.
- Nitish Nagesh, Iman Azimi et al. **"Towards Building Deep Personal Lifestyle Models using Multimodal N-of-1 Data."**, 29th International Conference on Multimedia Modeling, Norway, 2023