

Sakin Kirti

Boston, MA

(408) 707-7383 | sakin.arya.kirti@gmail.com | <https://www.linkedin.com/in/sakinkirti>

Professional Summary

Results-driven AI Scientist with a strong background in Computer Science and Biology. I am passionate about leveraging data science and AI techniques to solve complex problems. Seeking opportunities to apply my expertise in Bayesian Networks, deep representation learning, and data engineering to drive innovation and deliver impactful solutions.

Skills

Machine Learning: Representation Learning, Vision Transformers, Bayesian Networks, Convolutional Networks, Supervised and unsupervised learning, deep learning, natural language processing, recommendation systems.

Programming Languages: Python, R, Java, MATLAB.

Data Science Tools: PyTorch, TensorFlow, scikit-learn, Keras, NumPy, pandas.

Big Data Technologies: Apache Spark, Hadoop, SQL, AWS (S3, RDS, EC2), GCP (Buckets, VMs)

Software Engineering: Agile methodologies, version control (Git), software development life cycle.

Data Visualization: Matplotlib, Seaborn, Tableau

Experience

Computational Biologist, Broad Institute of MIT and Harvard, Cambridge, MA, 07/2023 – PRESENT

- Applied DINO with vision transformers to large genetic perturbation screens, improving data retention by 30%
- Identified novel genetic targets in heart failure, leading to new million-dollar invested D1 targets at Bayer
- Led development of high-throughput contractility platform for cardiac spheroids, leading to cost savings of >\$100,000

AI and ML Intern, Surgo Health, Washington, DC, 06/2022 – 09/2022

- Predicted transportation access as key to improving maternal mortality rates using Bayesian Networks and do-calculus, sparking analysis of transportation access for DC-area pregnant women
- Built multilevel regression models with R to understand efficacy of the 'Rides for Moms' program, demonstrating reduced maternal mortality rates in African American and Latinx populations with improved transportation access

AI Research Intern, Center for Computational Imaging and Personalized Diagnostics, Cleveland, OH, 01/2022 – 10/2022

- Applied convolutional neural networks using PyTorch to race-stratified patient MRIs, identifying that African American patients are diagnosed at later stages of prostate cancer compared to Caucasian counterparts
- Utilized CWRU's High Performance Computing core for computationally intensive tasks, optimizing model performance and scalability

Education

Case Western Reserve University, Cleveland, OH, 08/2019 – 05/2023

Computer Science, GPA: 3.82/4.0

Honors and Awards: CWRU University Scholarship, Highest Achieving Sophomore, Junior-Senior Scholarship

Groups and Clubs: Co-Founder CWRU Photography, CWRU Weightlifting Club, CWRU Club Rowing

Projects

Bayesian Network for Major Adverse Cardiac Event Prediction

Built a Bayesian network and deep neural network to predict and calculate risk for major adverse cardiac events. Comparison of the models suggests that the deep neural network only picks up on severe cases while the Bayesian network performs consistently across severity of cases.

<https://github.com/sakinkirti/bayesian-mace-prediction>

Comprehensive Monkeypox Dashboard

Developed a comprehensive dashboard using Python and JS to visualize and predict the spread of monkeypox in the US, employing machine learning algorithms and data visualization techniques.

<https://github.com/sakinkirti/monkeypox-dashboard>