Stanford



# Junming Seraphina Shi

Postdoctoral Scholar, Radiation Biology

## Bio

### BIO

I am a postdoctoral fellow at Stanford University, jointly mentored by Dr. Mohammad Shahrokh Esfahani and Dr. Md Tauhidul Islam. My research focuses on developing robust statistical machine learning methods for noninvasive, cost-effective cancer diagnostics, with applications in early detection, treatment monitoring, and precision oncology.

I received my Ph.D. from UC Berkeley, where my dissertation centered on advancing biostatistical machine learning approaches for complex biomedical challenges. My work addressed causal inference for continuous treatments, bias and measurement patterns in ICU electronic health records, and deep learning–based biclustering and prediction of cancer-drug responses. Across these projects, I developed interpretable and scalable tools for analyzing high-dimensional, multimodal clinical data.

At Stanford, I continue to build novel statistical learning frameworks tailored to real-world clinical needs—particularly through the analysis of liquid biopsy (cell-free DNA) and cancer imaging data. My current work aims to improve cancer detection and monitoring, with a focus on noninvasive, accessible, and clinically meaningful solutions to pressing challenges in oncology. I enjoy interdisciplinary collaborations and working across fields to drive innovation in biomedical research. Deeply committed to cancer research, I aim to bridge rigorous computational methodology with patient-centered impact by designing tools that are scalable, equitable, and translational.

### STANFORD ADVISORS

- Mohammad Shahrokh Esfahani, Postdoctoral Faculty Sponsor
- Md Tauhidul Islam, Postdoctoral Research Mentor