Stanford



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BIO

Dr. Zhang is currently a research engineer at the Department of Biomedical Data Science, and the data manager in the Center for Cancer Systems Biology at Stanford. Dr. Zhang completed her M.S. and Ph.D. in Electrical Engineering, both from Stanford University. Her Ph.D. studies focused on developing machine learning (ML) algorithms for metabolomics data analysis using graph theory. She received Young Scientist Award from the Metabolomics Society for her algorithm on metabolic network analysis delineating the effects of genetic mutants and drug treatment on the metabolome. Her postdoctoral studies at the Department of Radiology, Stanford School of Medicine, integrated radiomic, genomic, transcriptomic, histopathologic and clinical data that identified a prognostic metabolic regulation biomarker for non-small cell lung cancer. She has developed open-source computational tools that have been appreciated by the broad research community and industry, including the CELESTA algorithm which has been incorporated into commercial analytical platform of NanoString. Dr. Zhang's research has made significant impacts in the fields of spatial multi-omics and cancer systems biology, and she has authored and co-authored publications including Cell, Nature Methods, Nature Communications etc.

Dr. Zhang's current research at Stanford primarily focuses on developing and implementing ML/AI approaches to integrate and analyze multi-modality data, including spatial multi-omics, radiologic imaging, histopathologic images and clinical data. Her research aims at bridging the gap between underlying disease molecular/cellular biology and clinical assessment to improve diagnostics, prognostics and treatment strategies.