Shicheng Guo is a Posdoc research and NLM supported fellowship in UW-Madison.

His areas of expertise lie in data mining and pattern recognition using deep learning, especially in life sciences. He has received several multi year grants from the National Institutes of Health for projects in his area of work, as well as contracts from the local industry both as a consultant and as a subcontractor.

His recent work includes proteomic, (epi)genomic, transcriptomic, methylomic, functional genomics of genetic dark matter, and systems biological/medical data analysis (for drug target identification and design, and functional elucidation of novel genetic/proteomic products in drug resistant tuberculosis), cancer diagnosis, reconstruction of gene regulatory networks), prediction of effects of Hydroxyurea on sickle cell anemia patients, and automated structure determination of complex carbohydrates from their NMR and GC-EIMS spectra.

Specialties:

Bioinformatics: NGS data analysis, sequence alignment, detection of alternative initiation sites (AIS), functional genomics, GWAS, de novo assembly and structural genomics

Cheminformatics: Automated and rapid chemical structure determination for biomedical and homeland security applications.

Medical Informatics: Molecular Diagnostics and Prognostics for infectious diseases, Disease prediction, medical diagnosis, drug efficacy prediction, drug dosage recommendation systems, EHRs, and natural language processing