

Deep Learning for Materials Informatics and Design

This project aims to apply deep learning models and algorithms to materials related problems. A specific example is developing convolutional neural networks (CNNs) to detect the optical response (micrographs) from liquid crystal interfaced with different proteins. Another example is applying natural language processing (NLP) methods, coupled with 2D representation using Simplified Molecular Input Line Entry System (SMILES), to establish the quantitative structure-property relationship (QSPR) and facilitate polymer design.

Maximum students: 5