A Multi-Output Convolutional Neural Network Model for Melanoma Detection and Prevention

Parambath, Anya (School: Girls Preparatory School)

This project was performed to aid individuals and pathologists in the diagnostic process of treating melanoma and ascertain the common trends of various melanoma cases and their proper classification. In this project, I built a model that can effectively discriminate between benign and malignant cases of melanoma in a clinical setting. I find that such a model can achieve an accuracy as high as 87.5% on previously unseen data, suggesting that a machine learning approach is appropriate for skin tumor classification problems. Convolutional neural networks present a promising solution to misdiagnosis in oncology settings.

Awards Won: