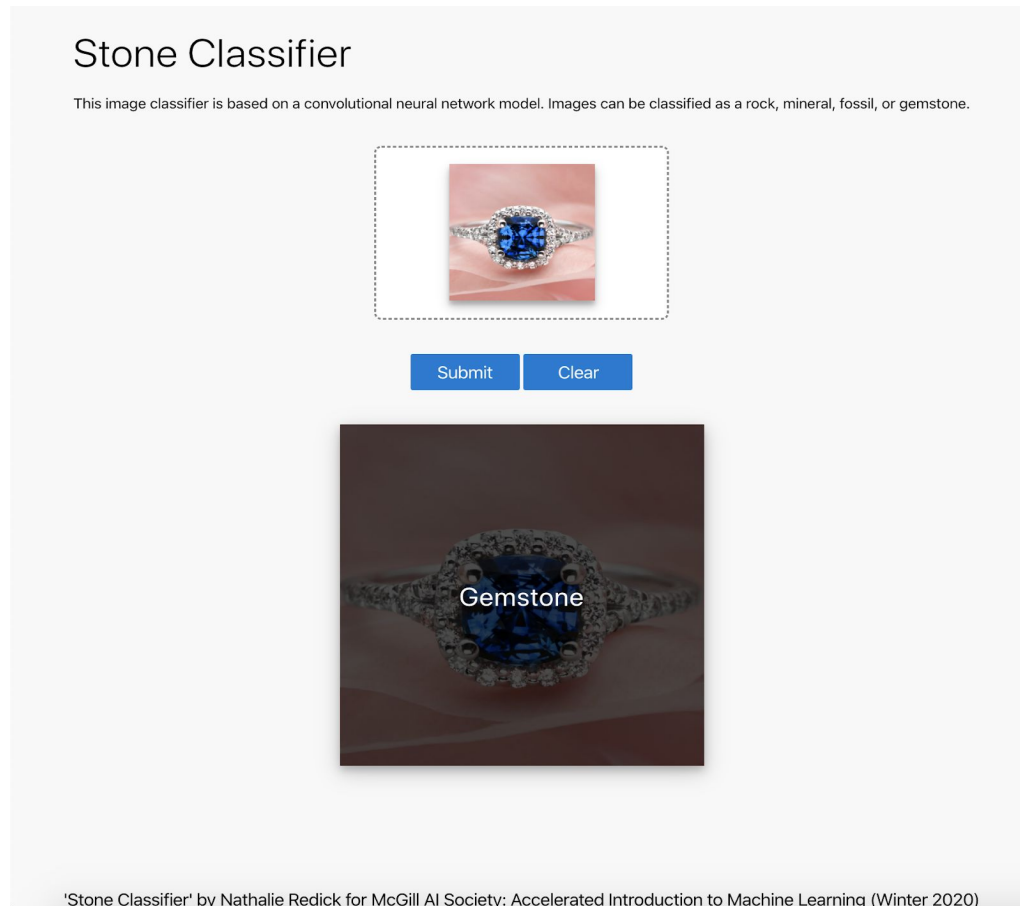


Bio:

Nathalie is a first year Computer Science student with a minor in Earth and Planetary Sciences. She is interested in applying machine learning to earth science and sustainability.

Headshot:

[headshot](#)

App screenshot:**Blurb:**

Classifying stones, particularly minerals, is traditionally a very hands-on process. This means that correctly classifying minerals and rock types typically requires extensive training, which inspired Nathalie to implement machine learning to make classification faster and easier. She originally wanted to classify specific mineral types, but found a severe lack of available data to make this feasible. In fact, she created a dataset for her final project by scraping images from the Smithsonian's NMNH Geology Collections Data Portal. She focused on a higher-level classification using a sequential convolutional neural network to categorize images into four groups. Her final model had an accuracy of 93.8% on test data and a test loss of 0.148.