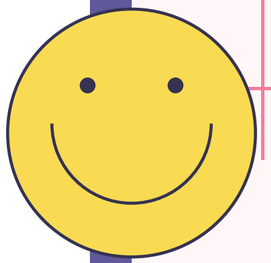
Browser

Presentation By Group 17

Content Based Image Retrieval system



Bone Age Prediction using Medical Images

Team Members

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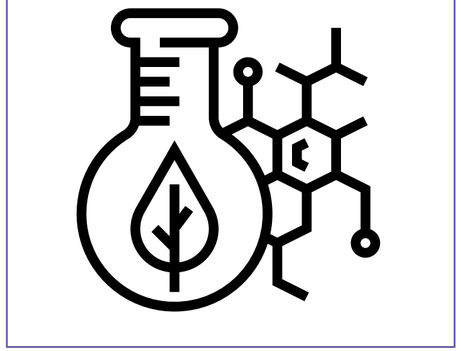
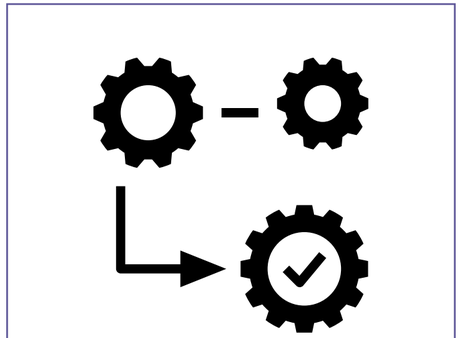
Problem Statement

Ever since the advent of Machine Learning, every industry which has harnessed its power has grown exponentially and subsequently revolutionized the field in which it was applied. One such field is the medical industry. It has been the cornerstone of the growth in diagnosis and research. So we will be using powerful Machine Learning Techniques to analyze and process X-Ray images of Human bones and predicting the age of a person/bone age particularly children

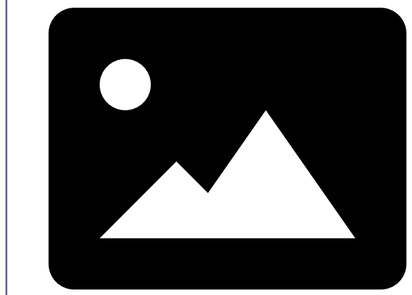
Previously..



Extraction of features from X-Ray Scans



Model Training



Test and Content Retrival

Preprocessing Techniques

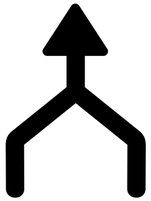
Feature Extraction

Image Coloring (To Greyscale)

Sobel Edge Detection (Filtering of the image)

Image Resizing

On Data



Data Merging

Data Cleaning

Focus

Model Building

To build various Machine Learning models from the already existing preprocessed data from the last review

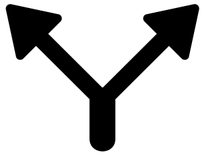
Prediction Analysis

To predict and analysis the results of various models built from the data

Additions

Improvements upon the previous review

- Standardized the extracted image data
- Splitting of data into train and test datasets
- Used different models to train the data
- Prediction of the test dataset based on different models
- Analyzed accuracy across all model


Models

- Random Forest
- Kth Nearest Neighbour
- Support Vector Machines
- Convolutional Neural Networks

Links to Python Notebook

https://colab.research.google.com/drive/1e15RBZx30_b2vKqRvOTvnhVLlGQKK28I?usp=sharing

Thank You