Project Design Phase-I
Solution Architecture

Date	19 September 2022
Team ID	PNT2022TMID24832
Project Name	Real-Time Communication System Powered by AI for Specially Abled
Maximum Marks	4 Marks

Solution Architecture:

A convolutional neural network architecture for deep learning which learns directly from data, eliminating the need for manual feature extraction. CNNs are particularly useful for finding patterns in images to recognize objects, faces, and scenes.

- **it is an important and more accurate way for image classification problems**. With Artificial Neural Networks, a 2D image would first be converted into a 1-dimensional vector before training the model.
- A CNN typically has **three layers**: a convolutional layer, a pooling layer, and a fully connected layer.
- Most of the time the Softmax Function is related to the Cross Entropy Function. In CNN, after the application of the Softmax Function, is **to test the reliability of the model using as Loss Function the Cross Entropy Function, in order to maximize the performance of our neural network**

Example - Solution Architecture Diagram:

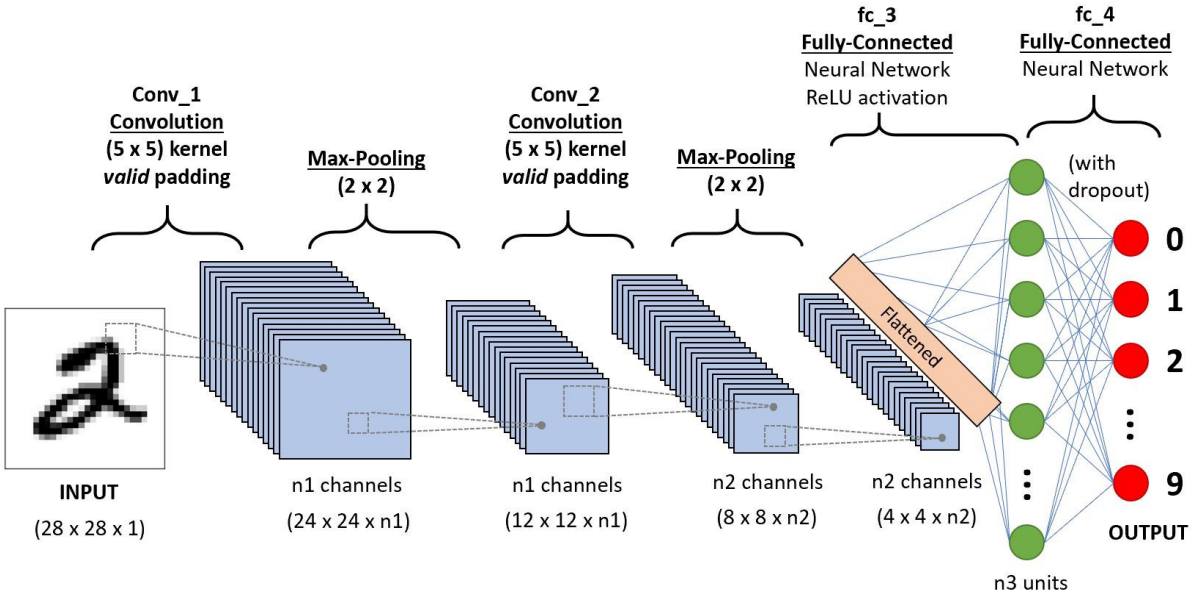

Figure 1: Architecture and data flow of the voice patient diary sample application

Reference:
https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-research-powered-by-ai-on-aws-part-1-architecture-and-design-considerations/