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| Name of educator | P Pavani Reddy |
| Title of the Project | Image Classifier |

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|  | **Question** | **Option 1** | **Option 2** | **Option 3** | **Option 4** | **Correct Answer** |
| **Q1** | Which of the following is NOT a common image augmentation technique? | Rotation | Flipping | Cropping | Normalization | Normalization |
| **Q2** | Which of the following algorithms is commonly used for image classification? | K-Means clustering | Decision tree | CNN | Support Vector Machines (SVM) | CNN |
| **Q3** | What is the purpose of a dropout layer in a neural network? | To prevent overfitting by randomly dropping out neurons during training. | To accelerate training by reducing the number of parameters. | To improve generalization by introducing noise into the network. | For sequential data | To prevent overfitting by randomly dropping out neurons during training. |
| **Q4** | Which optimization algorithm is commonly used to train deep neural networks? | Gradient Descent | Stochastic Gradient Descent (SGD) | Adam | ReLU | Adam |
| **Q5** | Which of the following is a common activation function used in CNNs? | Sigmoid | ReLU | Softmax | Adam | ReLU |
| **Q6** | What is the purpose of a confusion matrix in image classification? | To visualize the performance of a classifier | To accelerate the accuracy of a classifier | To improve the most common misclassifications | accuracy | To visualize the performance of a classifier |
| **Q7** | Which metric is used to evaluate the performance of an image classifier on imbalanced datasets? | accuracy | precision | recall | F1-score | F1-Score |
| **Q8** | What is the difference between a one-stage and a two-stage object detection model? | One-stage models directly predict bounding boxes and class probabilities, while two-stage models first generate region proposals and then classify them. | One-stage models are faster but less accurate than two-stage models. | Two-stage models are faster but less accurate than one-stage models. | There is no significant difference between the two. | One-stage models directly predict bounding boxes and class probabilities, while two-stage models first generate region proposals and then classify them |
| **Q9** | What is the difference between a generative adversarial network (GAN) and a variational autoencoder (VAE)? | GANs are generative models, while VAEs are discriminative models. | GANs use adversarial training, while VAEs use variational inference. | GANs can generate high-quality images, while VAEs cannot. | VAEs can generate high-quality images, while GANs cannot. | GANs use adversarial training, while VAEs use variational inference |
| **Q10** | How can you evaluate the fairness of an image classification model? | By measuring the model's performance on different demographic groups. | By analyzing the model's decision-making process. | By testing the model on adversarial examples. | Low quality data | By measuring the model's performance on different demographic groups. |