Table 1 Model Comparison Chart

Model	**Number Of Convolution Layers**	**Number of Filters**	**Pooling Size**	**Filter Size**	**FC**
AlexNet	5	[96,256]	[3x3]	[11x11,3x3]	3
VGG	16	[64,128,256,512]	[2x2]	[3x3]	3
GoogleNet	22	Varies	[3x3,5x5]	[5x5,3x3,1x1]	1

Table 2 CNN model setup Parameters

Model	**Number Of Convolution Layers**	**Number of Filters**	**Pooling Size**	**Filter Size**	**FC**
CNN-1	4	32,64	[2x2, 1x1]	[5x5, 5x5]	1
CNN-2	4	[32, 64, 128]	[2x2, 1x1]	[11x11]	1
CNN-3	5	[32, 64, 128, 256]	[2x2, 1x1]	[11x11, 3x3]	2
CNN-4	5	[32, 64, 128, 256, 512]	[2x2, 1x1]	[11x11, 3x3, 1x1]	3
AlexNet	5	[96,256]	[3x3]	[11x11,3x3]	3
VGG	16	[64,128,256,512]	[2x2]	[3x3]	3
GoogleNet	22	Varies	[3x3,5x5]	[5x5,3x3,1x1]	1
Nightshade-CNN	**5**	**[32, 64, 128, 256, 512]**	**[2x2, 1x1]**	**[11x11, 3x3, 1x1]**	**1**
Enhanced Nightshade-CNN					

Table 3 CNN parameters and execution epochs for nightshade crop leaf datasets

Model	**Number Of Convolution Layers**	**FC**	**Filter Size**	**Epochs (Times in Hrs.)**
CNN-1	4	1	[5x5, 5x5]	2.5
CNN-2	4	1	[11x11]	4.5
CNN-3	5	2	[11x11, 3x3]	5.5
CNN-4	5	3	[11x11, 3x3, 1x1]	9
AlexNet	5	3	[11x11,3x3]	8
VGG	16	3	[3x3]	26
GoogleNet	22	1	[5x5,3x3,1x1]	48
Nightshade-CNN[9-10]	**5**	**1**	**[11x11, 3x3, 1x1]**	**4**
Enhanced Nightshade-CNN[11]	**5**	**1**	**[11x11, 3x3, 1x1]**	**6**

Table 4 highlights the correlation between model size and storage space.

Model	**Number Of Convolution Layers**	**FC**	**GPU Type**	**Memory Requirement**	**Processor**
AlexNet	5	3	Tesla T4	16GB	NVIDIA Tesla T4
VGG	16	3	A100 Tensor	40 GB	NVIDIA A100 Tensor Core
GoogleNet	22	1	A100 Tensor	40 GB	NVIDIA A100 Tensor Core
Nightshade-CNN[8-10]	**5**	**1**	**Tesla T4**	**16GB**	**NVIDIA Tesla T4**
Enhanced Nightshade-CNN[11]	**5**	**1**	**Tesla T4**		