

Abstract geometric lines in the top-left corner of the slide, consisting of several thin, black, overlapping lines that form a complex, non-representational shape.

SPORTS IMAGE CLASSIFICATION

Deep Convolutional Neural Network

AGENDA

Models Used

The achieved accuracy

Data preparation Steps

Test Script are ready !

Conclusion

TRIAL ONE

خلقه سيره في أضعف

Symmetric CNN Model in its Volume Construction

Feature Maps at each Hidden Layers

32 – 64 – 128 – 64 – 32

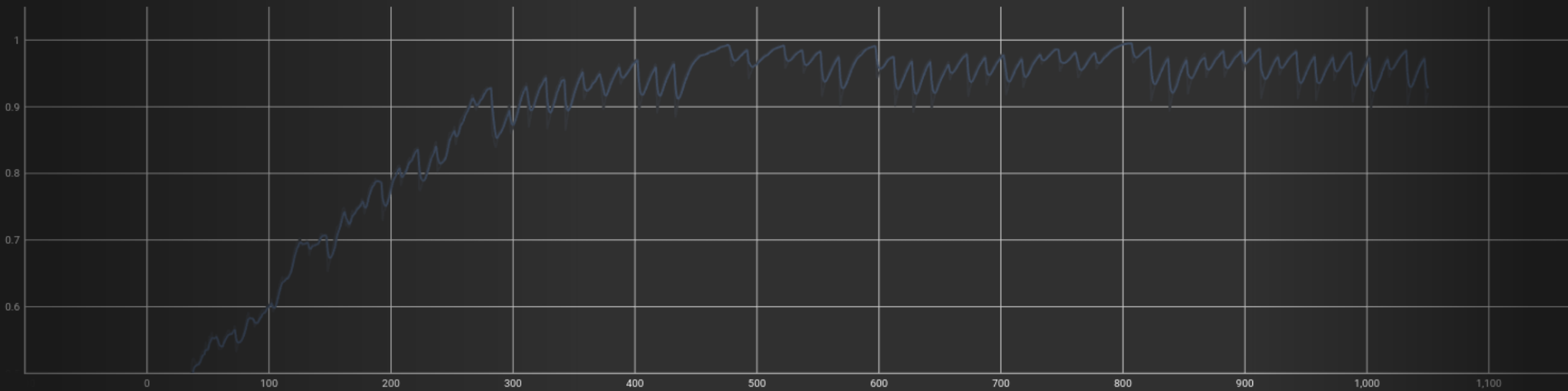
Fixed Kernel Size at All Layers 5x5

Pooling is applied after each Convolution

Fully Connected Layers with 1024 Neurons

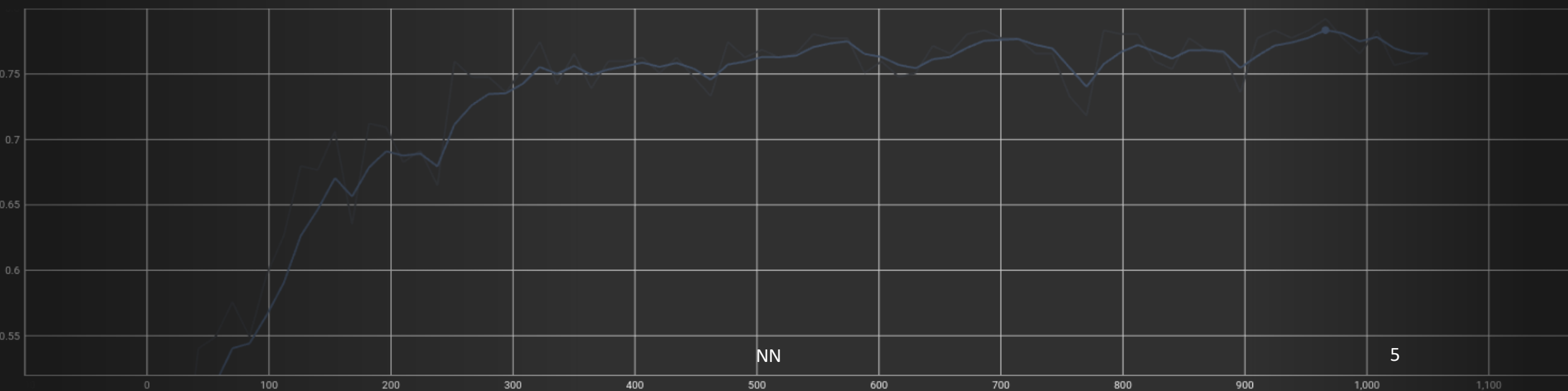
Output Layer use 6 Neurons for each Category with
Softmax Activation

Accuracy



Run Smoothed Value Step Time
0.7835 0.7923 966 12/25/22, 4:30 AM

Validation



NN

5

THOUGHTS

- We're Trapped in an Overfitting!, Needs Regularization.

DATA PREPARATION STEPS

Standardization – Images Augmentation



IMAGE PIXEL VALUES STANDARDIZATION

Zero Center

With mean computed over the whole dataset)

STD Normalization

With std computed over the whole dataset

Benefit: If we didn't scale our input training vectors, the ranges of our distributions of feature values would likely be different for each feature, and thus the learning rate would cause corrections in each dimension that would differ (proportionally speaking) from one another. We might be overcompensating for a correction in one weight dimension while under compensating in another.



IMAGED AUGMENTATION

Randomly flip an image
around X axis (left to right).

Randomly rotate an image by a
random angle.

Benefit: provides a new perspective of capturing the object in real life, applying
Variations to Input Images rescue a deep learning model from (over)fit to the
"few" examples

OUR TEAM



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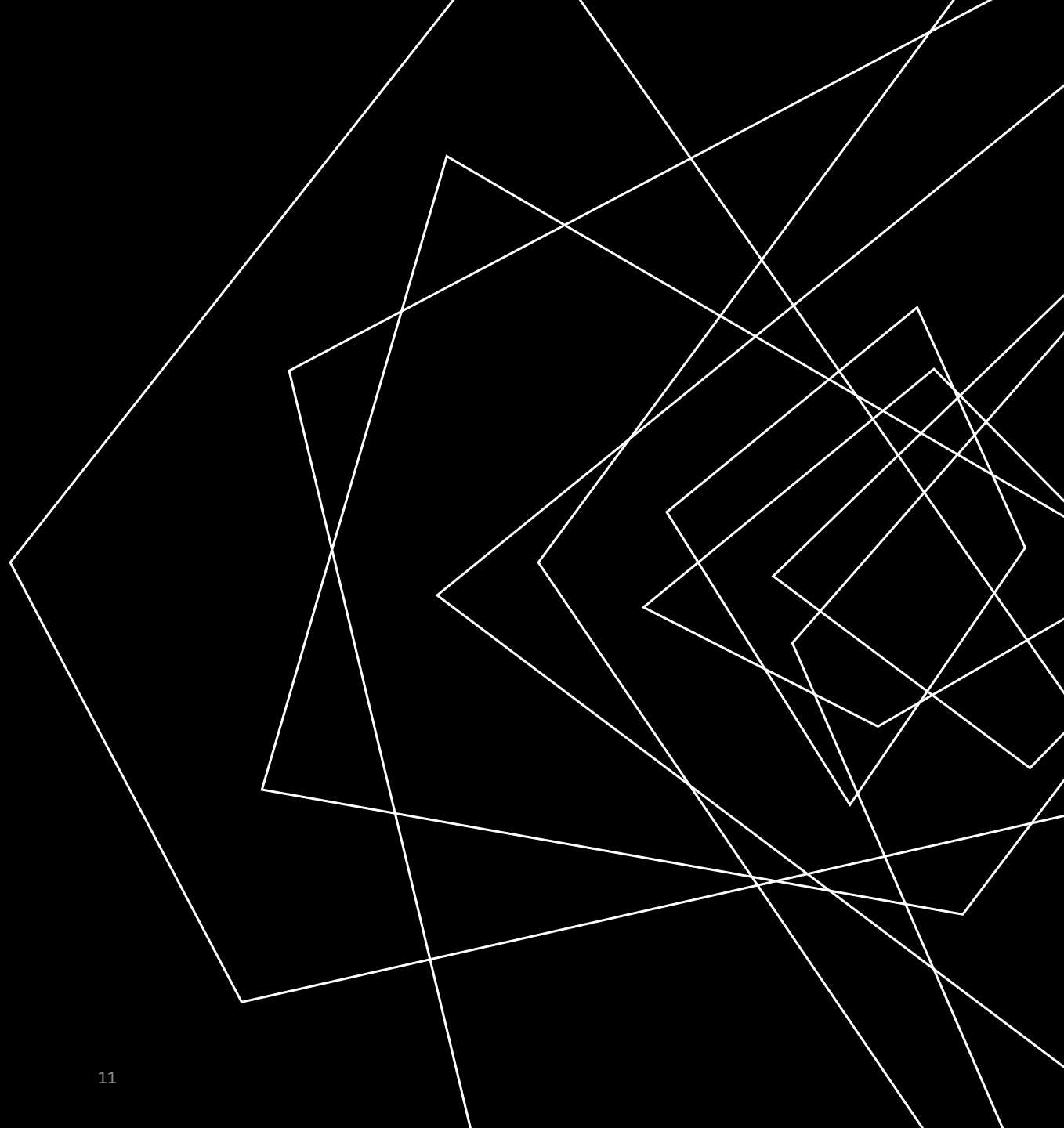


Ahmed Shaban



Ahmed Mosadek

TEST SCRIPT IS
READY



A series of white, thin, overlapping geometric lines and polygons on a black background, located on the left side of the slide. The lines form various shapes, including triangles and quadrilaterals, some of which are nested or intersecting.

THANK YOU