

Assalamu Alikum, Now I will continue the presentation by giving a synthesis of our thesis. We started with a small wrist X-ray dataset and we trained five strong CNN Models EfficientNetB2, DenseNet169, InceptionV3, Xception, NASNetMobile.

After that we take best 2 model DenseNet169 and InceptionV3 then concatenate them and proposed a new model WristNet.

We see in previous slides the performance of our models and they performed very well all individuals.

And also, we augmented images better generalization to improve learning.

And our Key Insight is Feature-level fusion enables strong performance even with limited data.

Now Comparison of our proposed model WristNet and our base paper model LSNet

Model	Accuracy	Precision	Recall
LSNet	86.5%	85.3%	87.2%
WristNet	97.50%	94.44%	99.00%

Key Improvements (WristNet vs. LSNet):

- Accuracy:** +11.0% (97.5% vs. 86.5%)
- Precision:** +9.14% (better at correctly identifying fractures)
- Recall:** +11.8% (better at detecting all fracture cases)

In future work, we will build on these results in several ways.

We can Expand the dataset with more diverse wrist X-ray images and other parts of human body.

Also, Explore other advanced CNN architectures for further improvement.

Third, Optimize WristNet for real-time clinical deployment on medical equipment.

And also Evaluate performance on external/public datasets for generalization.

Lastly, develop a user-friendly application for radiologists it will increases the robustness of this field.

To conclude,

we have presented WristNet, a **concatenation** of DenseNet169 and InceptionV3, achieved 97.50% accuracy, surpassing LSNet by 11%. We applied **feature concatenation** to combine the strengths of these models into a single fused model.

This work reflects our contribution to advancing deep learning in medical imaging, with the goal of improving diagnostic accuracy and efficiency in clinical practice.

Thank you for your attention. We welcome any questions or discussion about the work.