Experiments.....

Ablation Study

Method	Accuracy	Precision	Recall	F1
FF+LR	0.650	0.612	0.579	0.595
Pre-trained VGG	0.721	0.669	0.738	0.702
Fine-tuned VGG	0.754	0.74	0.689	0.714
ConvAE	0.734	0.685	0.744	0.713
MVNN	**0.846**	**0.809**	**0.857**	**0.832**

- **EQ1:** Is MVNN able to improve the performance of fake news detection based on visual modality?
- 1) MVNN is best, validates MVNN can effectively capture the intrinsic characteristics of fake-news images, achieves an accuracy of 84.6%, outperforming existing approaches by 9.2%
- 2) Fine-tuned VGG better than Pre-trained VGG, show that the learned features are more relevant to the task of fake news detection after fine-tuning the model on the fake news dataset.

Experiments.....

Ablation Study

Method	Accuracy	Precision	Recall	F1
FF+LR	0.650	0.612	0.579	0.595
Pre-trained VGG	0.721	0.669	0.738	0.702
Fine-tuned VGG	0.754	0.74	0.689	0.714
ConvAE	0.734	0.685	0.744	0.713
MVNN	**0.846**	**0.809**	**0.857**	**0.832**

- **EQ1:** Is MVNN able to improve the performance of fake news detection based on visual modality?
- 3) Performance of ConvAE is slightly better than Pre-trained VGG. Show that ConvAE has the ability of understanding universal semantics of images, similar to models pre-trained in a supervised manner.
- 4) Performance of FF+LR is the worst methods because captured forensics features is very limited