Sensor Applications

Multi-view Scene Image Inpainting Based on Conditional Generative Adversarial Networks

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Abstract—Multi-views systems have been widely used in robots, ADAS(Advanced Driver Assistance Systems), monitor systems and so on, using multi-views, the machine can better perceive the surrounding scenes. The exposed lens and the camera are easily contaminated by the outside, resulting in abnormal images. Image inpainting technology can utilize the prior information of the image structure, texture and other information provided by the surrounding pixels of the abnormal area to recover the damaged image, which can reduce the loss of visual information. Provide as much information as possible for the machine's decisions. In order to achieve the above purposes, considering the characteristics of multi-vision system, a novel image inpainting method is proposed. The basic network structure is generative adversarial networks conditional on the other camera's synchronized images which are from different viewpoints at the same time. The whole method combines reconstruction loss and confrontation loss, integrating spatial transform networks, group convolution and channel switching technology to achieve high quality inpainting results.

Index Terms—IEEE, IEEE Sensors Letters, LaTeX, paper, template.

I. INTRODUCTION

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July 12, 2017

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II. CONCLUSION

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REFERENCES

[1] H. Kopka and P. W. Daly, *Guide to LaTeX*, 4th ed. Boston, MA: Addison-Wesley, 2004.

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