



# Single View to Stereo Image Synthesis

Progress Report 3  
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Tarik Eker, Niklas Munkes, Kaan Yücel, Julian Jurcevic, Ronny Göttler

# New Architecture: StereoDiffusion [3]

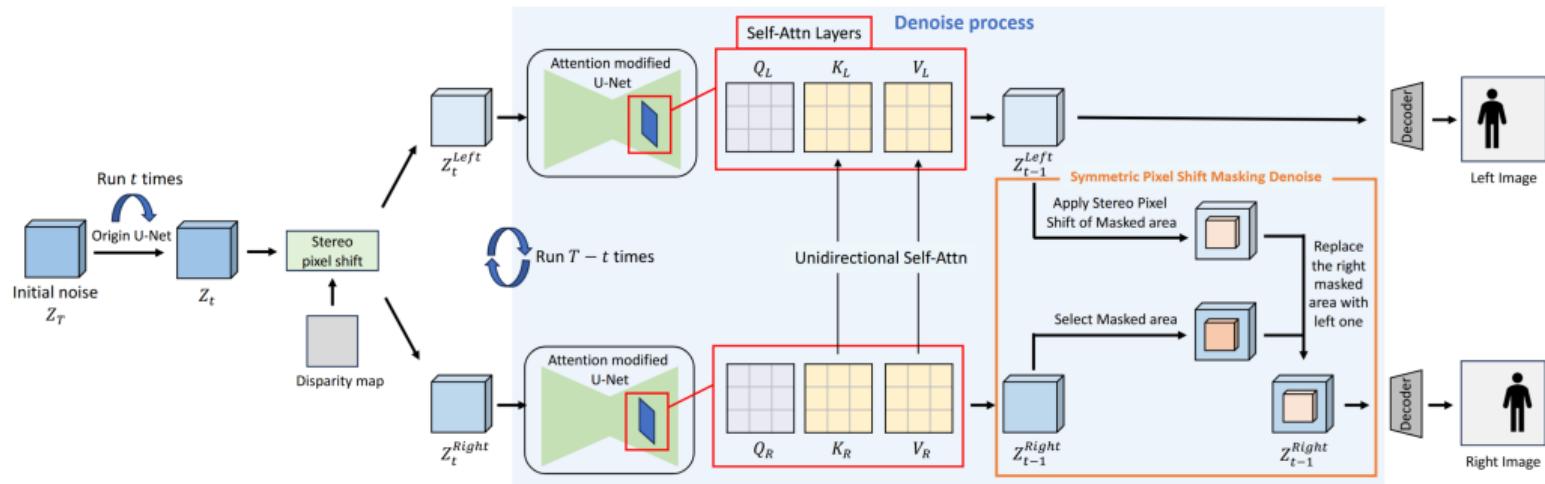


Figure: From [3]

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# StereoDiffusion: Stereo Pixels Shift

TODO



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# StereoDiffusion: Symmetric Pixel Shift Masking Denoise

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# StereoDiffusion: Bi/Uni-directional Self-Attention

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## StereoDiffusion: General Characteristics

- Training-free: utilizes pretrained DPT [1] and StableDiffusion [2] without fine-tuning
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- [1] Ranftl, René, Alexey Bochkovskiy & Vladlen Koltun (2021). *Vision Transformers for Dense Prediction*. <https://arxiv.org/abs/2103.13413>.
- [2] Rombach, Robin, Andreas Blattmann, Dominik Lorenz, Patrick Esser & Björn Ommer (2022). *High-Resolution Image Synthesis with Latent Diffusion Models*. <https://arxiv.org/abs/2112.10752>.
- [3] Wang, Lezhong, Jeppe Revall Frisvad, Mark Bo Jensen & Siavash Arjomand Bigdeli. 2024. StereoDiffusion: Training-Free Stereo Image Generation Using Latent Diffusion Models. In *2024 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, 7416–7425. DOI: [10.1109/cvprw63382.2024.00737](https://doi.org/10.1109/cvprw63382.2024.00737).