

SwinFGHash: Fine-grained Image Retrieval via Transformer-based Hashing Network

Supplementary Document

BMVC 2021 Submission # 1551

1 Visualization













































Query	Top-10 Returned Items										
<div>CUB-200-2011</div> 											SwinFGHash P@10 80%
	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	
<div>Prothonotary Warbler</div> 											GreedyHash P@10 70%
	✓	✓	✓	✓	✓	✗	✓	✗	✗	✓	
<div>Stanford Dogs</div> 											SwinFGHash P@10 80%
	✓	✓	✓	✓	✓	✗	✓	✗	✓	✓	
<div>Standard Poodle</div> 											GreedyHash P@10 70%
	✓	✓	✓	✓	✓	✓	✗	✓	✗	✗	

Figure 1: The top-10 images returned by SwinFGHash and GreedyHash [1] on the CUB-200-2011 and Stanford Dogs datasets with binary codes @ 32 bits.

To better understand the validity of the proposed SwinFGHash, we illustrate the top 10 retrieved items returned by SwinFGHash and GreedyHash [1] on the CUB-200-2011 and Stanford Dog datasets, respectively, as shown in Figure 1. It is clear that the relevance of the top 10 images returned by SwinFGHash is higher than that of GreedyHash, which means that SwinFGHash is more user-friendly and useful in real-life scenarios.

References

[1] Shupeng Su, Chao Zhang, Kai Han, and Yonghong Tian. Greedy hash: Towards fast optimization for accurate hash coding in cnn. In *Advances in Neural Information Processing Systems*, volume 31, 2018.