The World's Most Awesome Poster

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Object Alignment

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Landmark Shape Model

Bayesian Partial Shape Inference

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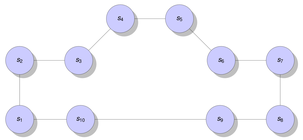

$$BPSI = \begin{cases} S = \Phi b + \mu + \epsilon \\ Y_p = M_p(sRS + t + \eta) \\ Y_h = M_h(sRS + t) \end{cases}$$

S - canonical shape, Y_p - partial shape, Y_h - hallucinated shape, $\Theta = \{s, R, t\}$, M - Occlusion Mask

Occlusion Handling

- Deformations lie on low-dimensional subspace, can estimate shape from partial observations.
- Sample and evaluate multiple unoccluded landmark subset (k out of N) hypothesis.

Landmark Appearance Model

Local Feature Representation: HOG

Databases and Experiments

Dataset

- Cars from 3500 images from MIT Street Scene dataset.
- 3433 cars manually annotated with landmarks.
- Preprocessed via Generalized Procrustes Analysis.

References

C. Gentry. *A fully homomorphic encryption scheme*. Stanford University, 2009.

J. Fan and F. Vercauteren. *Somewhat practical fully homomorphic encryption*. IACR Cryptology ePrint Archive, 2012:144, 2012.