Table 1. Photo-sketch matching on the memory gap database (Rank 1 accuracy, %). Comparing MTL-GPR, GPR, Polynomial MTL, Polynomial SVR, Linear Regr. and NN. Sketch input is given by column and matched with model trained on corresponding cell of MGDB. Average accuracies and standard deviations were measured over 15 random splits of 68 training subjects and 32 testing subjects(subjects in training and testing sets are different).

Accuracy	Viewed						1 Hour						24 Hour						Unviewed					
	MG	G-	PM	PS	LR	NN	MG-	G-	PM	PS	LR	NN	MG	G-	PM	PS	LR	NN	MG	G-	PM	PS	LR	NN
Photo	**99.2±1.8**	88.1±4.6	88.2±3.2	90.0±4.1	53.3±4.3	71.4±6.7	**96.6±1.8**	70.0±2.8	65.2±5.5	56.1±8.6	39.0±5.7	51.6±6.7	**90.3±3.9**	55.2±4.2	50.3±6.4	52.2±6.3	32.2±8.9	31.5±5.8	**86.0±6.7**	35.4±5.6	35.5±3.9	38.4±7.9	34.3±5.7	21.2±6.7
Viewed	-	-	-	-	-	-	**90.2±5.6**	58.4±4.6	63.2±6.7	66.4±5.5	52.3±2.8	51.6±6.7	**86.6±4.5**	57.5±5.0	44.2±7.2	46.4±7.8	26.2±7.8	31.5±5.8	**73.5±8.9**	33.4±2.1	32.2±3.4	38.3±7.9	24.4±8.3	21.2±6.7
1 Hour	-	-	-	-	-	-	-	-	-	-	-	-	**69.6±6.4**	41.2±3.1	44.3±6.3	45.3±6.0	26.0±9.4	31.5±5.8	**63.1±6.4**	32.3±7.2	29.0±4.2	35.2±6.9	18.2±6.0	21.2±6.7
24 Hour	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**42.0±4.2**	30.2±5.6	30.1±8.3	32.3±4.5	18.0±6.2	21.2±6.7

Table 2. The importance of Bayesian memory modelling: Rank 1 MGDB match results (%) without/with reconstruction confidence. Average accuracies and standard deviations were measured over 15 random splits of 68 training subjects and 32 testing subjects(subjects in training and testing sets are different).

Accuracy	Viewed	1h	24h	Unviewed
photo	86.0±5.2 / 99.2±1.8	85.6±3.2 / 96.6±1.8	60.1±3.6 / 90.3±3.9	50.0±2.3 / 86.0±6.7
Viewed	-	56.5±4.2 / 90.2±5.6	43.3±3.0 / 86.6±4.5	40.0±2.5 / 73.5±8.9
1h	-	-	38.0±3.0 / 69.6±6.4	36.2±2.5 / 63.1±6.4
24h	-	-	-	28.0±4.0 / 42.0±4.2

Table 3. Matching results (Rank 1 accuracy, %) on forensic sketch database (1/3 test split) using MTL-GPR / STL-GPR. Compare: 21% from [1] and 9% by direct HoG matching. Average accuracies and standard deviations were measured over 15 random splits of 68 training subjects and 32 testing subjects(subjects in training and testing sets are different).

Accuracy	Viewed	1h	24h	Unviewed
Photo	22.3±2.6 / 35±3.6	22.2±5.2 / 34.0±6.8	15.4±3.2 / 40.2±3.3	18.0±3.6 / 41.3±3.6
Viewed	-	65.4±2.6 / 48.5±8.2	40.1±4.2 / 50.1±7.2	33.3±3.6 / 48.0±2.8
1h	-	-	78.6±3.4 / 48.4±3.6	54.9±6.2 / 40.3±3.2
24h	-	-	-	65.2±8.2 / 42.3±3.6

References

[1] S. Ouyang, T. M. Hospedales, Y.-Z. Song, and X. Li. Cross-modal face matching: Beyond viewed sketches. In *ACCV*, 2014.