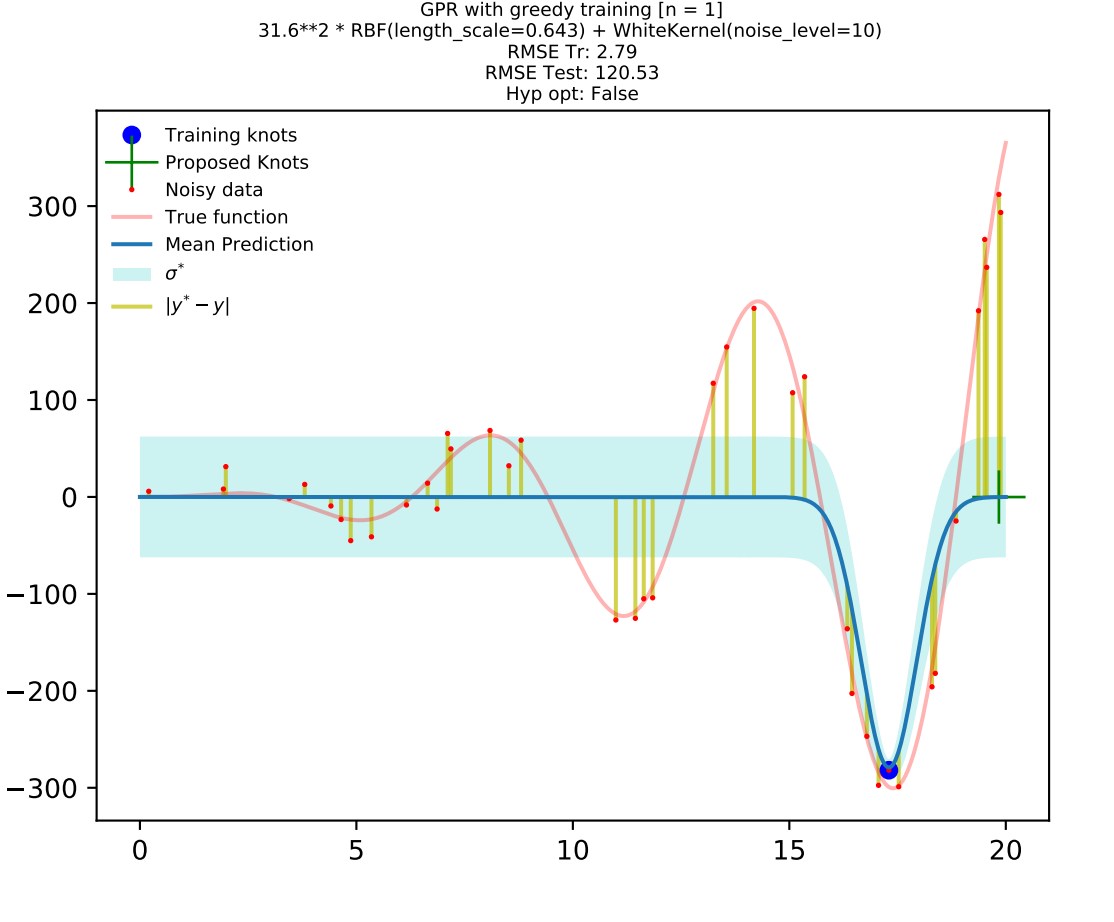
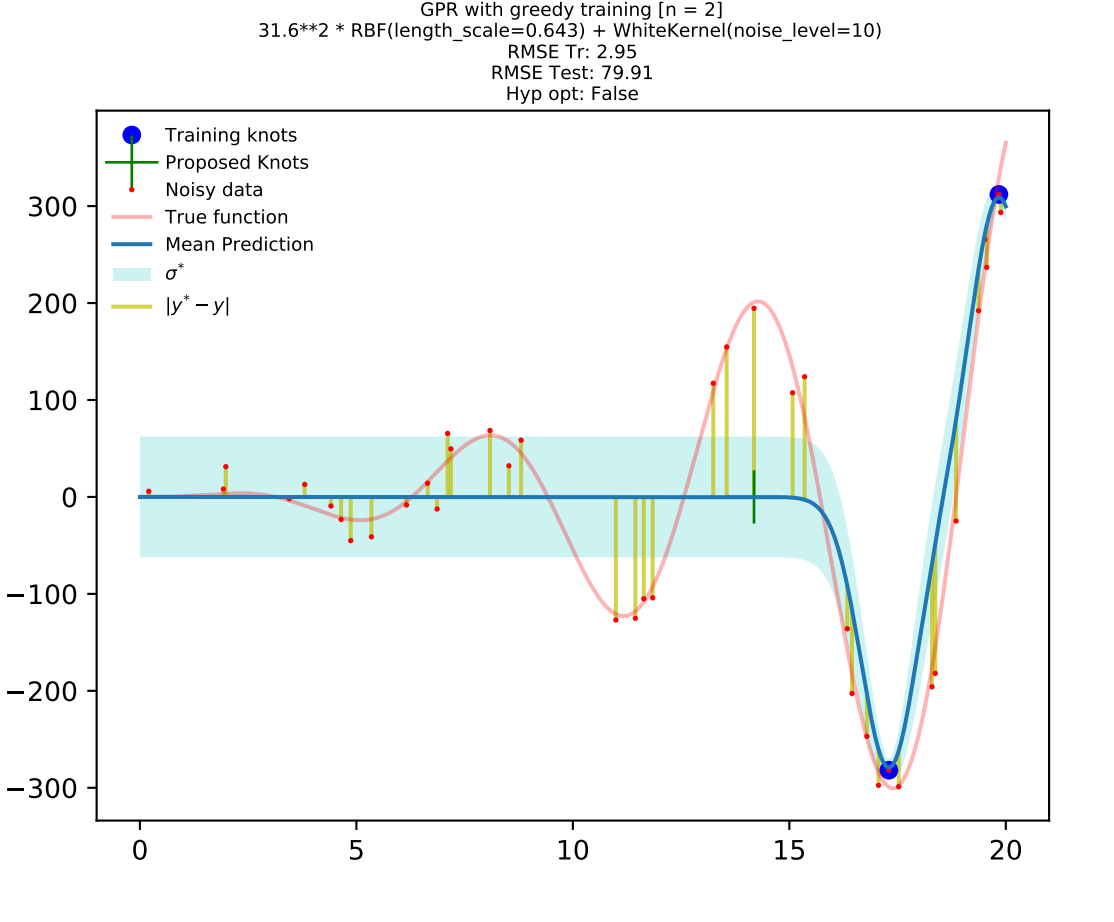
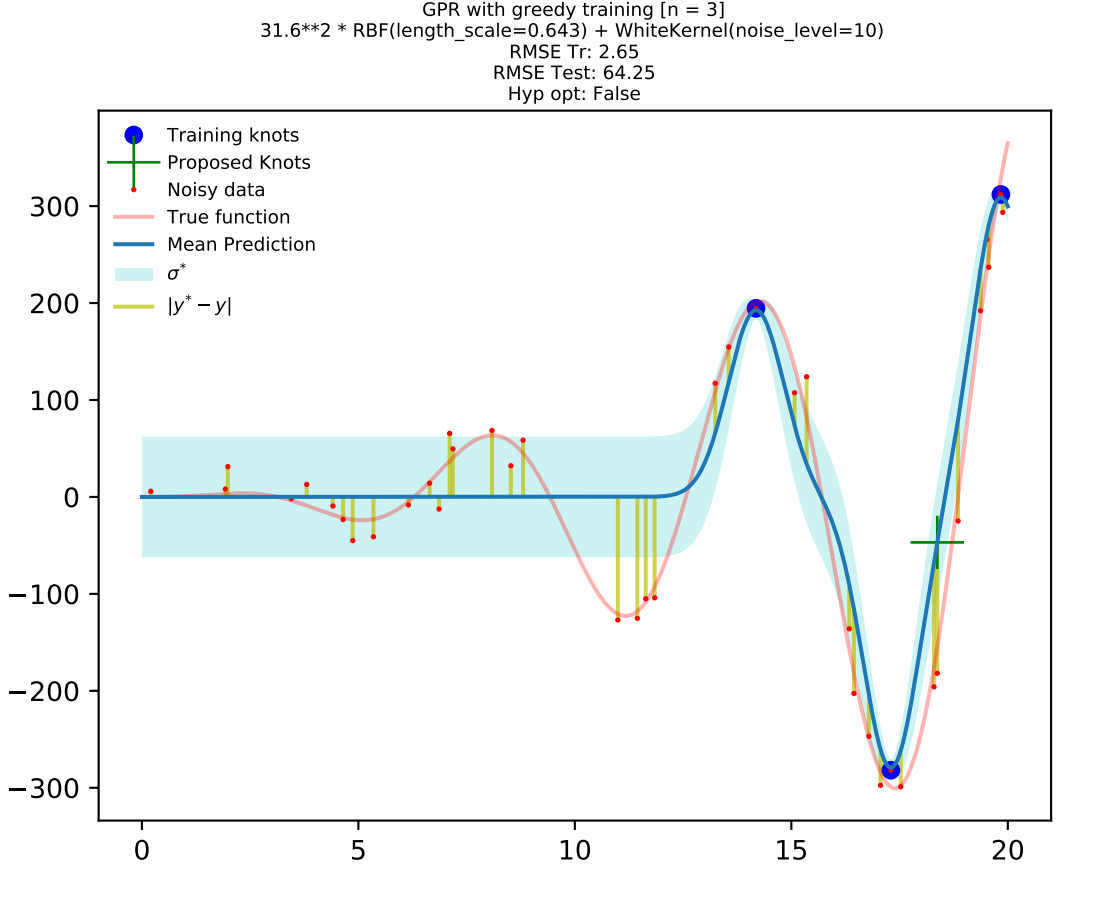
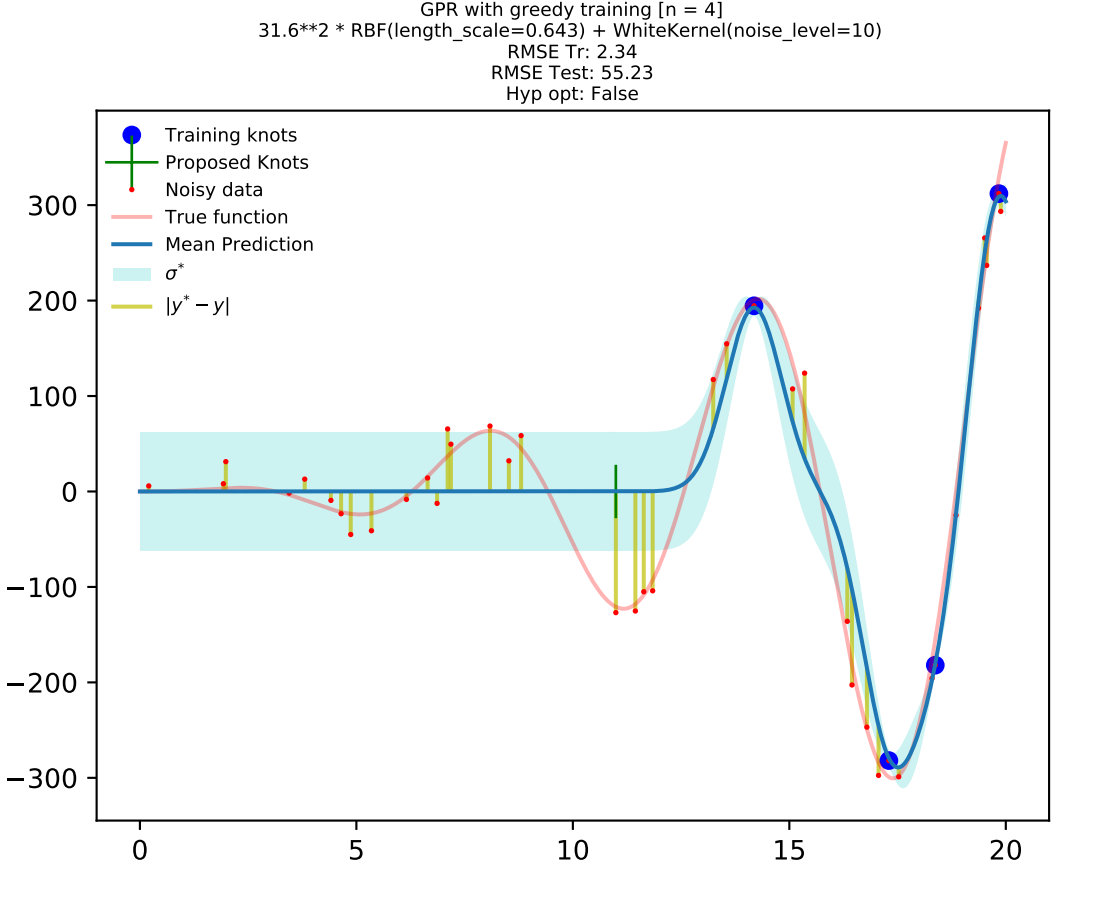
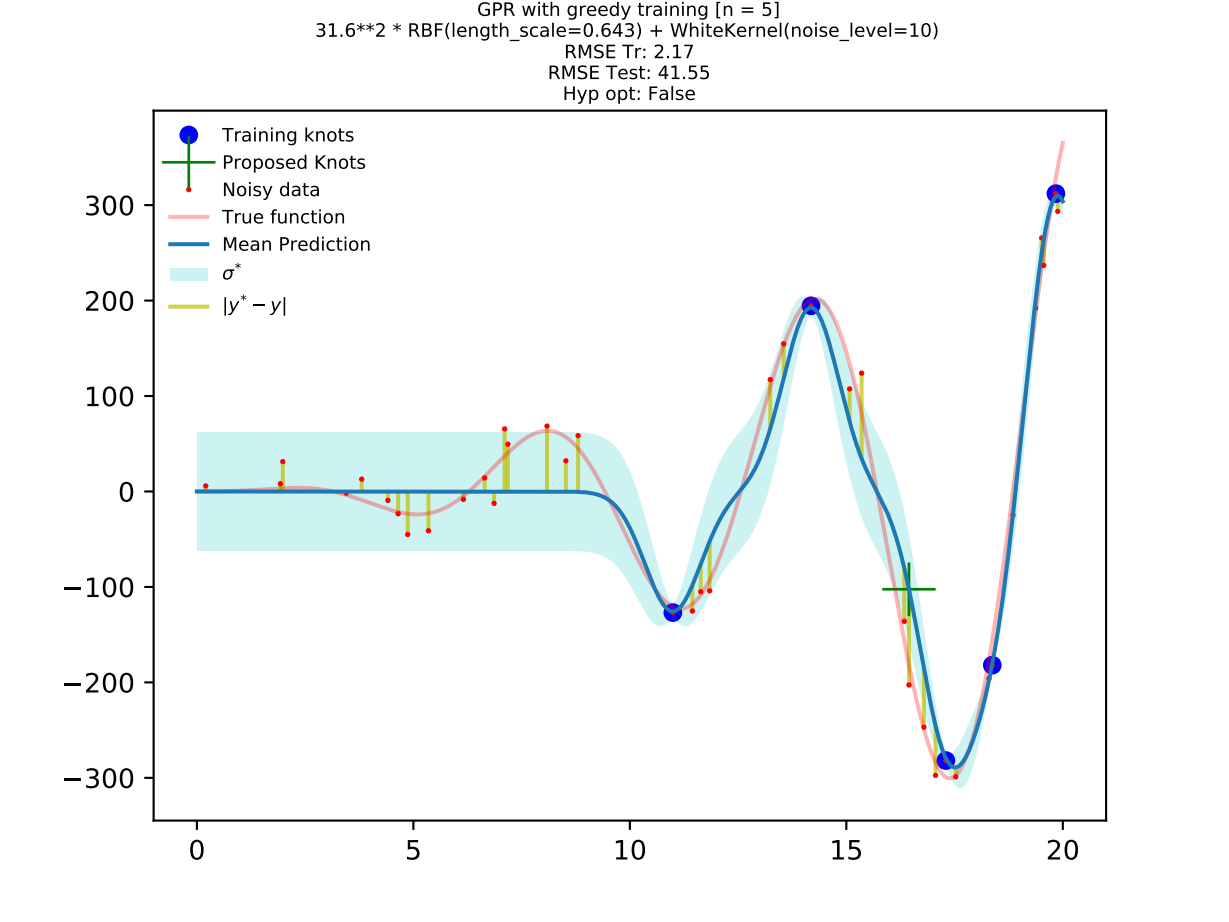

GPR with greedy training [n = 1]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.79
RMSE Test: 120.53
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
10
15
20


GPR with greedy training [n = 2]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.95
RMSE Test: 79.91
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
10
15
20


GPR with greedy training [n = 3]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.65
RMSE Test: 64.25
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
10
15
20


GPR with greedy training [n = 4]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.34
RMSE Test: 55.23
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
10
15
20


GPR with greedy training [n = 5]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.17
RMSE Test: 41.55
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
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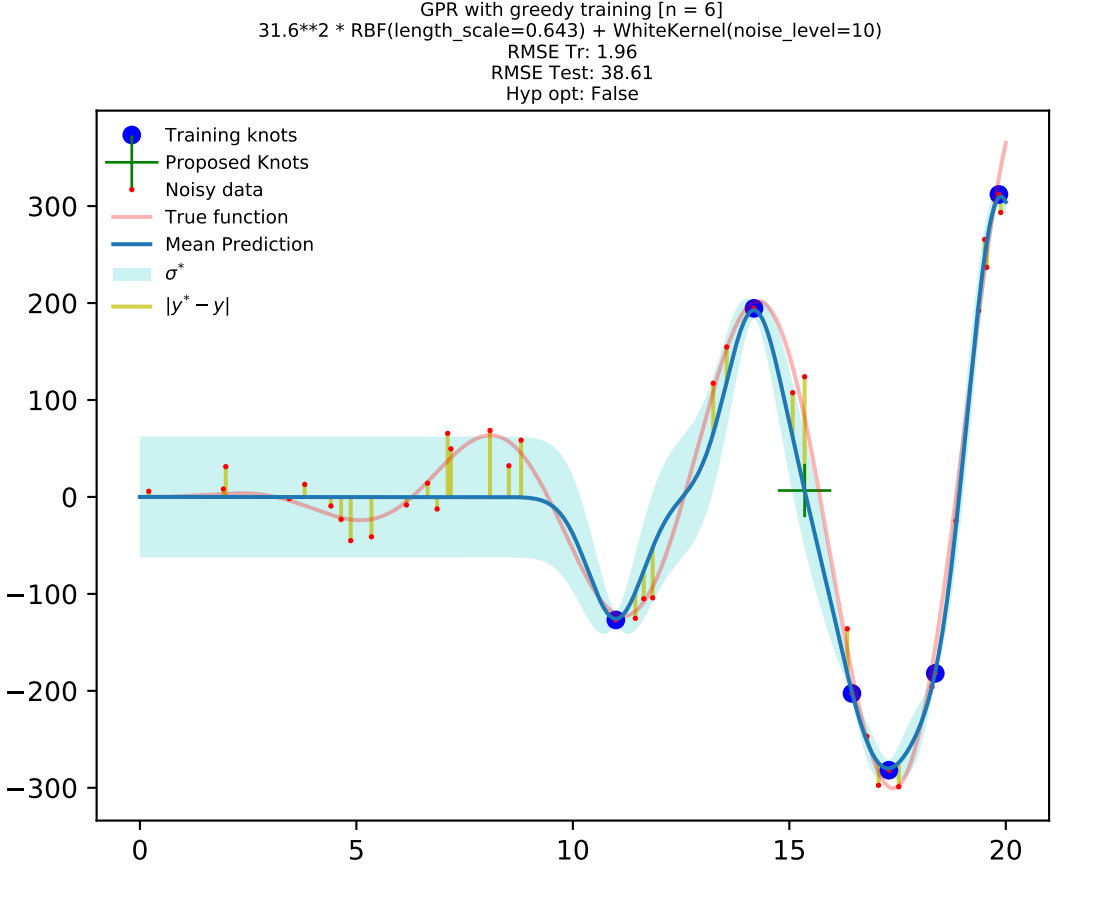
GPR with greedy training [n = 6]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 1.96
RMSE Test: 38.61
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
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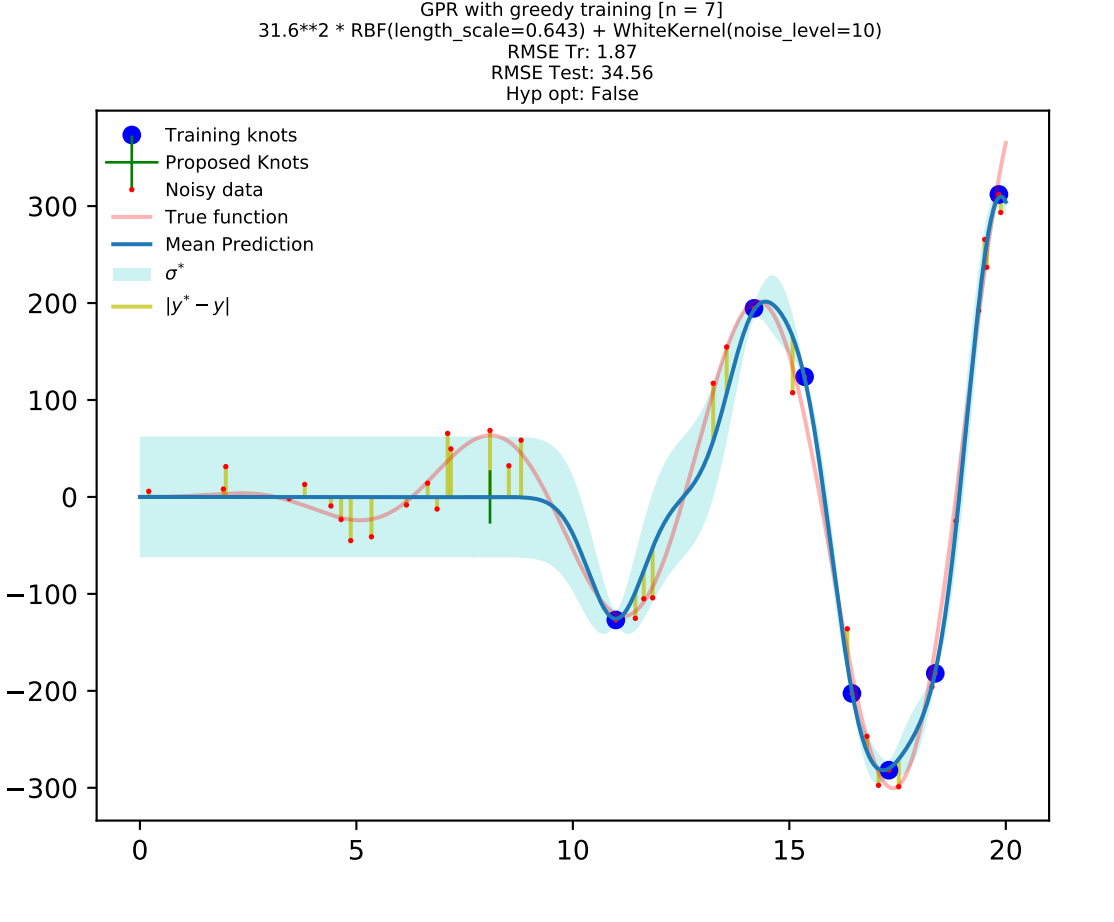
15
20


GPR with greedy training [n = 7]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 1.87
RMSE Test: 34.56
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
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5
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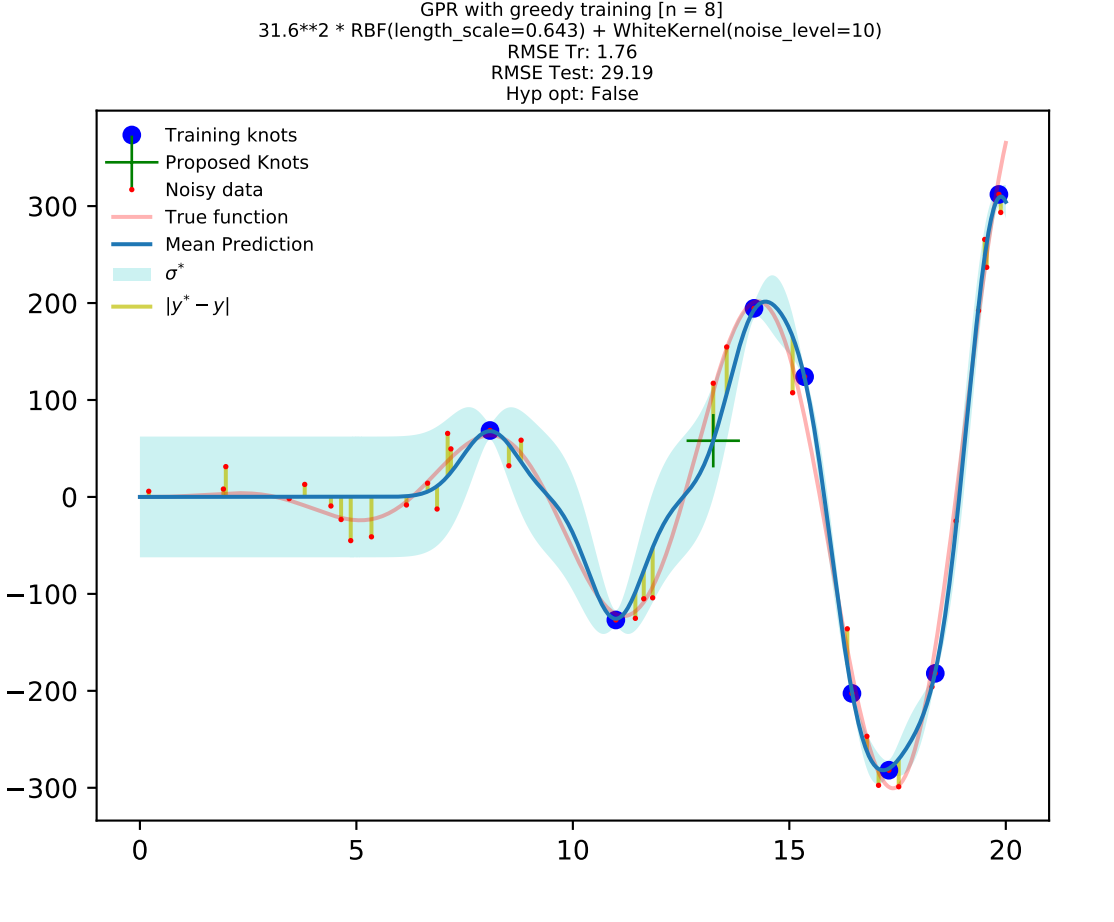
GPR with greedy training [n = 8]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 1.76
RMSE Test: 29.19
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
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5
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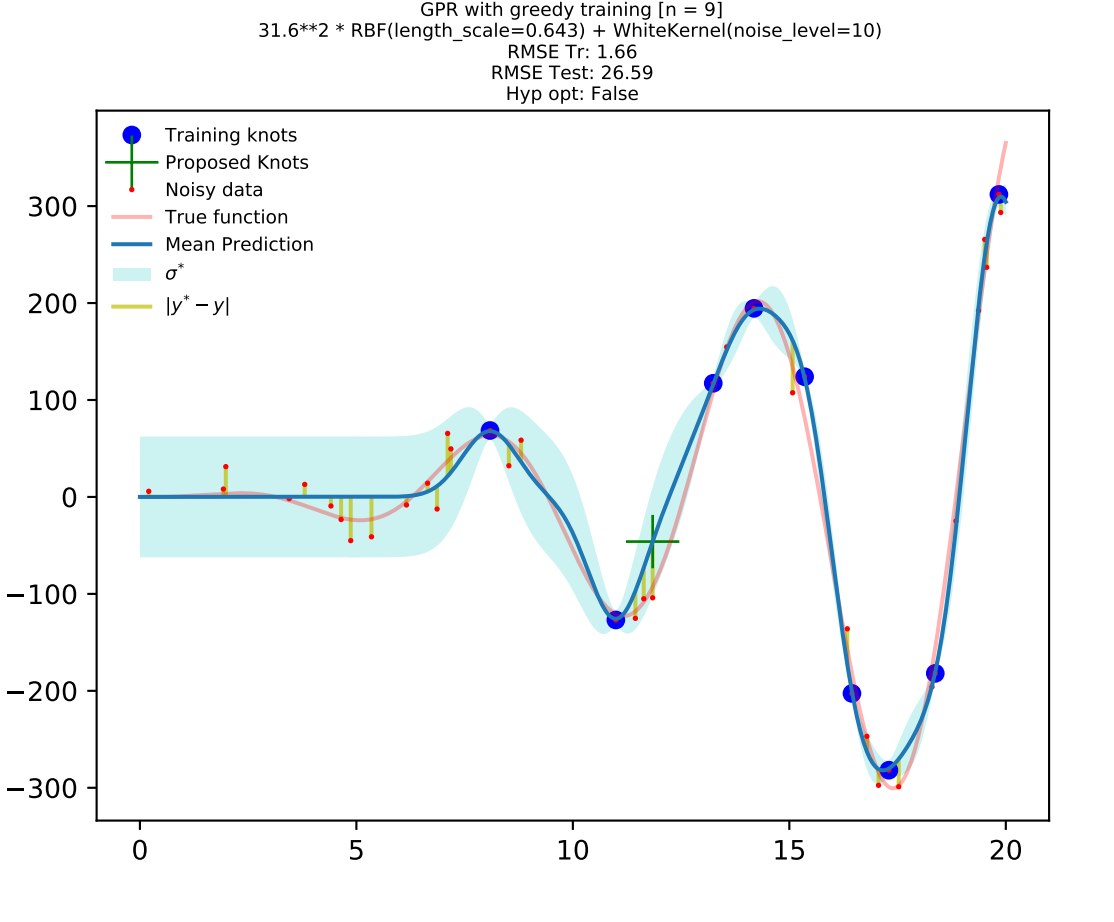
GPR with greedy training [n = 9]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 1.66
RMSE Test: 26.59
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
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5
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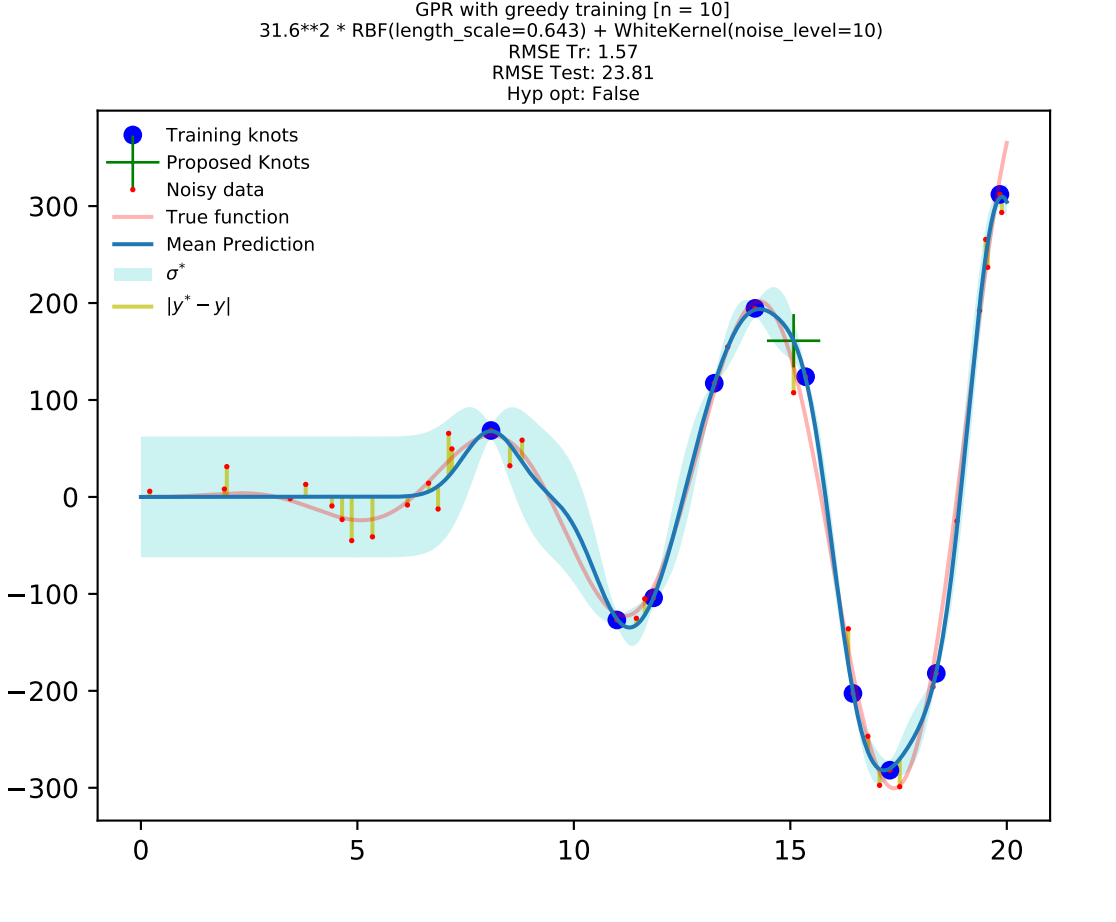
GPR with greedy training [n = 10]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 1.57
RMSE Test: 23.81
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
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−100
−200
−300
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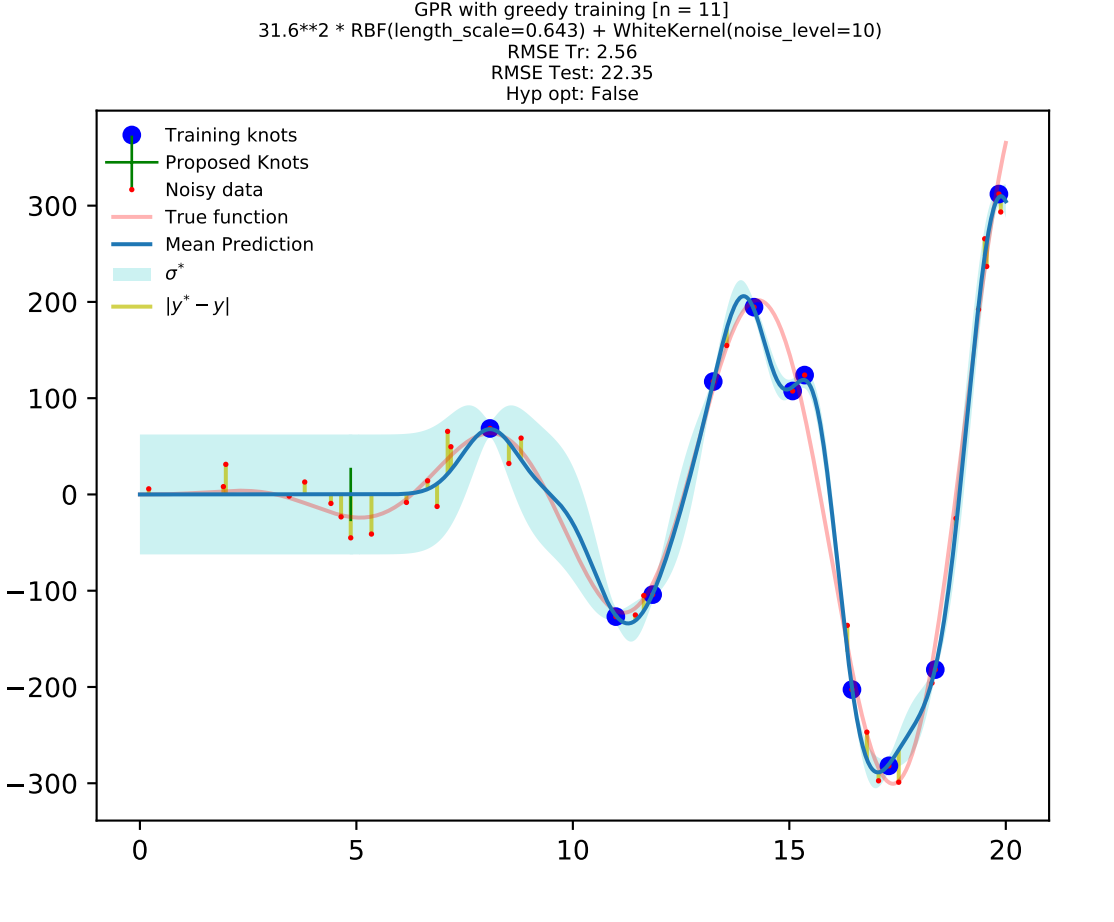
GPR with greedy training [n = 11]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.56
RMSE Test: 22.35
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
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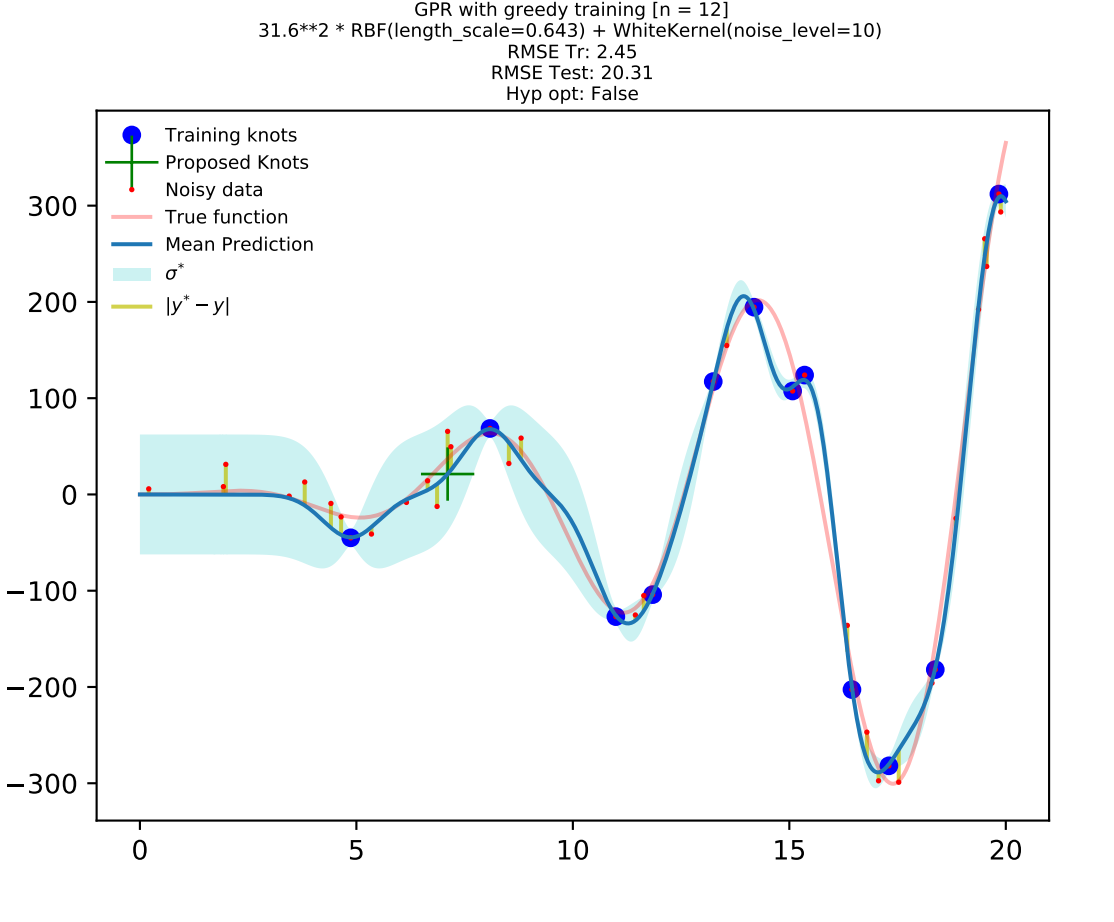
GPR with greedy training [n = 12]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.45
RMSE Test: 20.31
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
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−100
−200
−300
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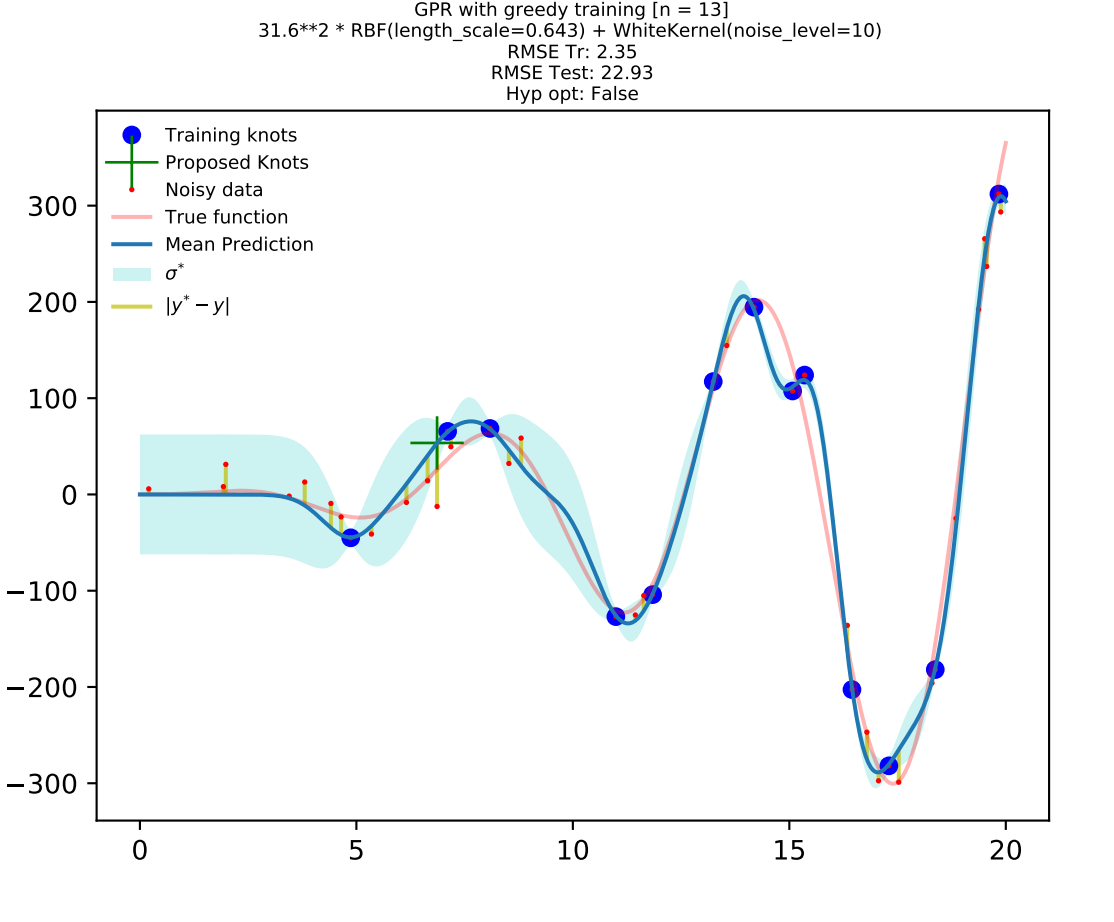
GPR with greedy training [n = 13]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.35
RMSE Test: 22.93
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
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100
0
−100
−200
−300
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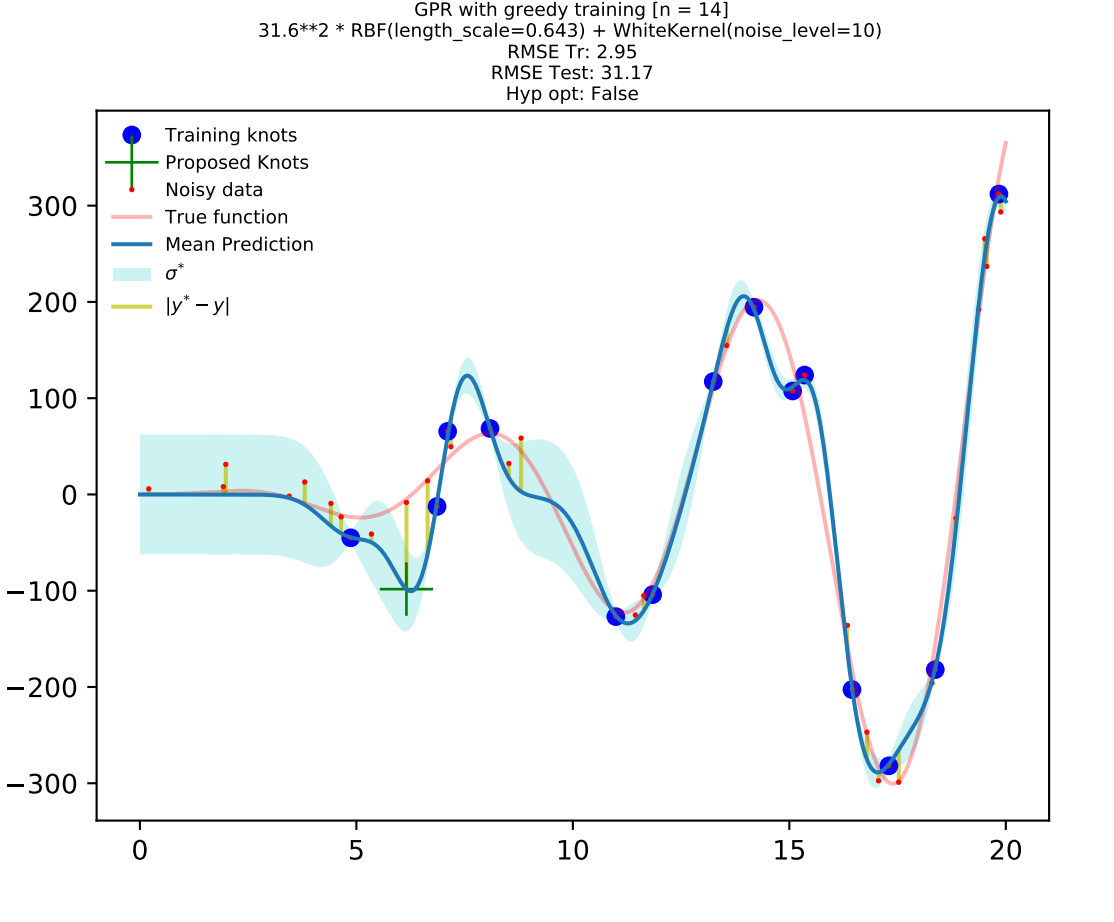
GPR with greedy training [n = 14]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 2.95
RMSE Test: 31.17
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
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100
0
−100
−200
−300
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5
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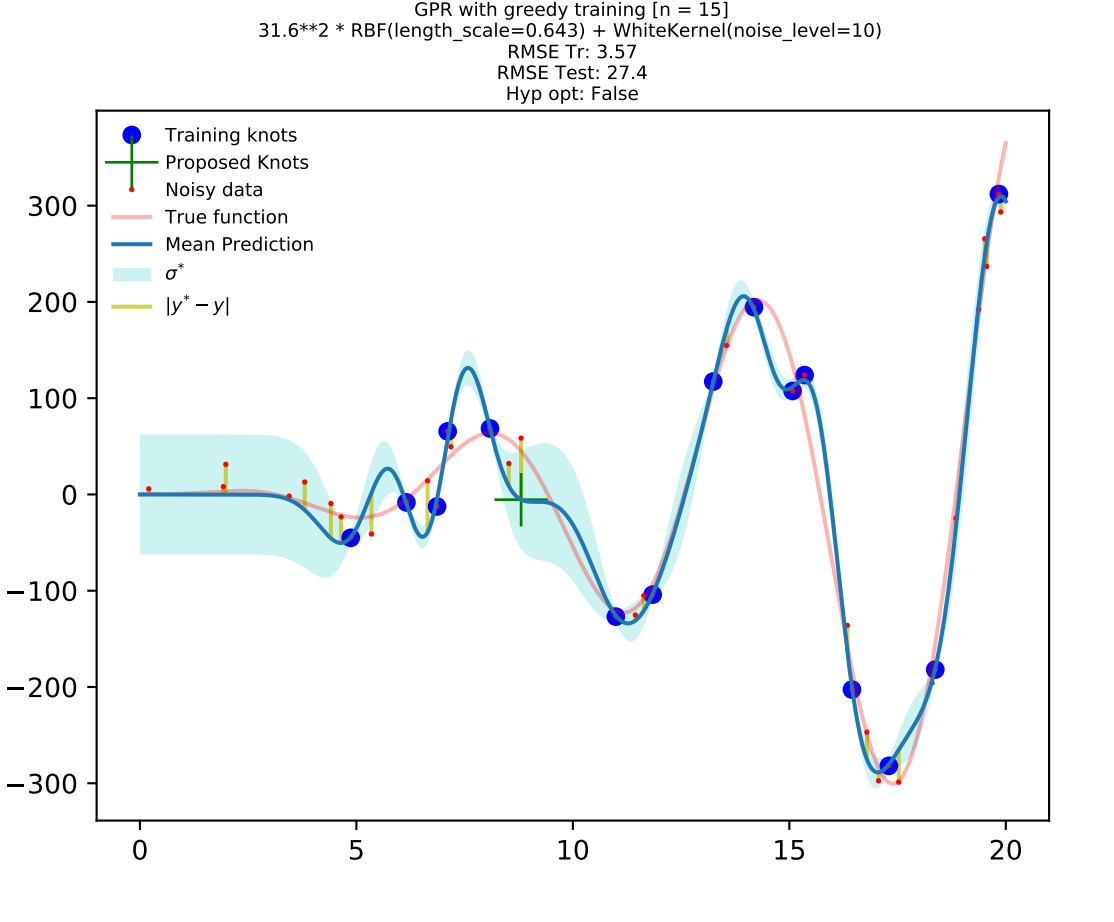
GPR with greedy training [n = 15]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 3.57
RMSE Test: 27.4
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
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5
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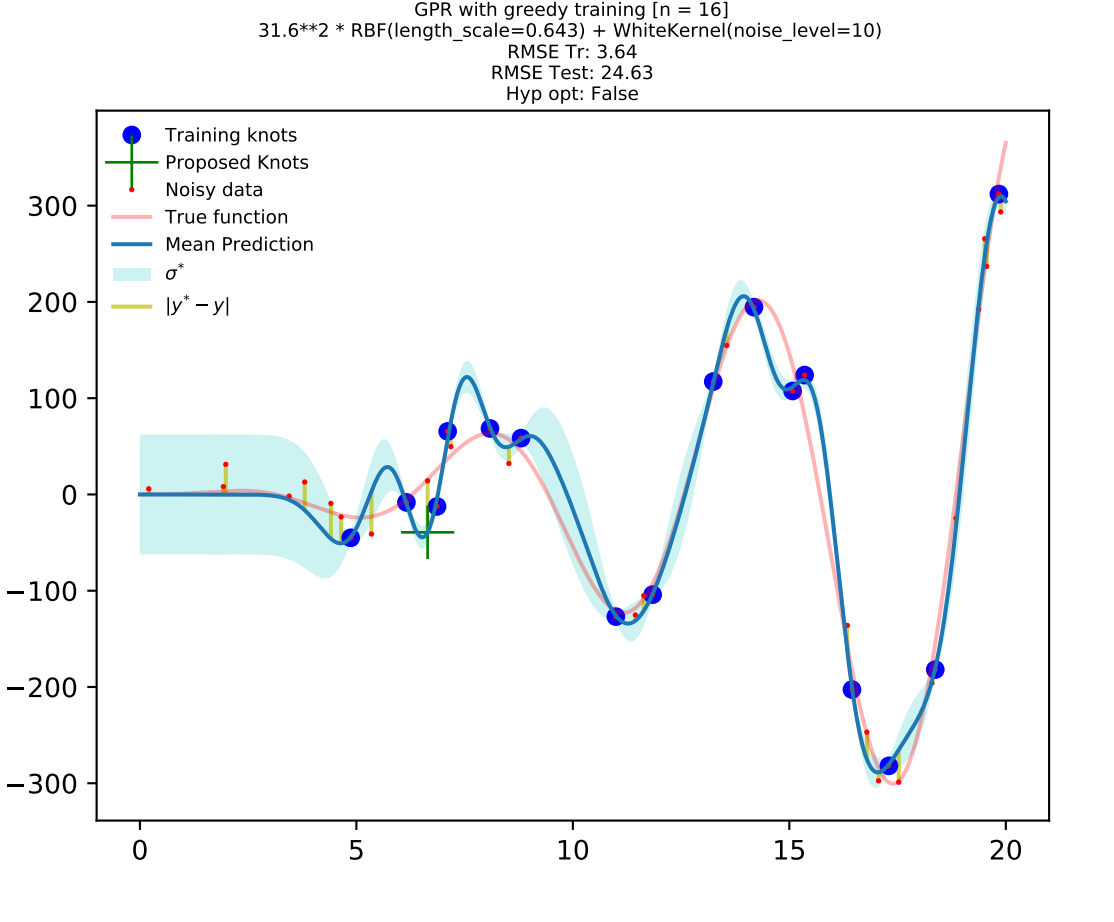
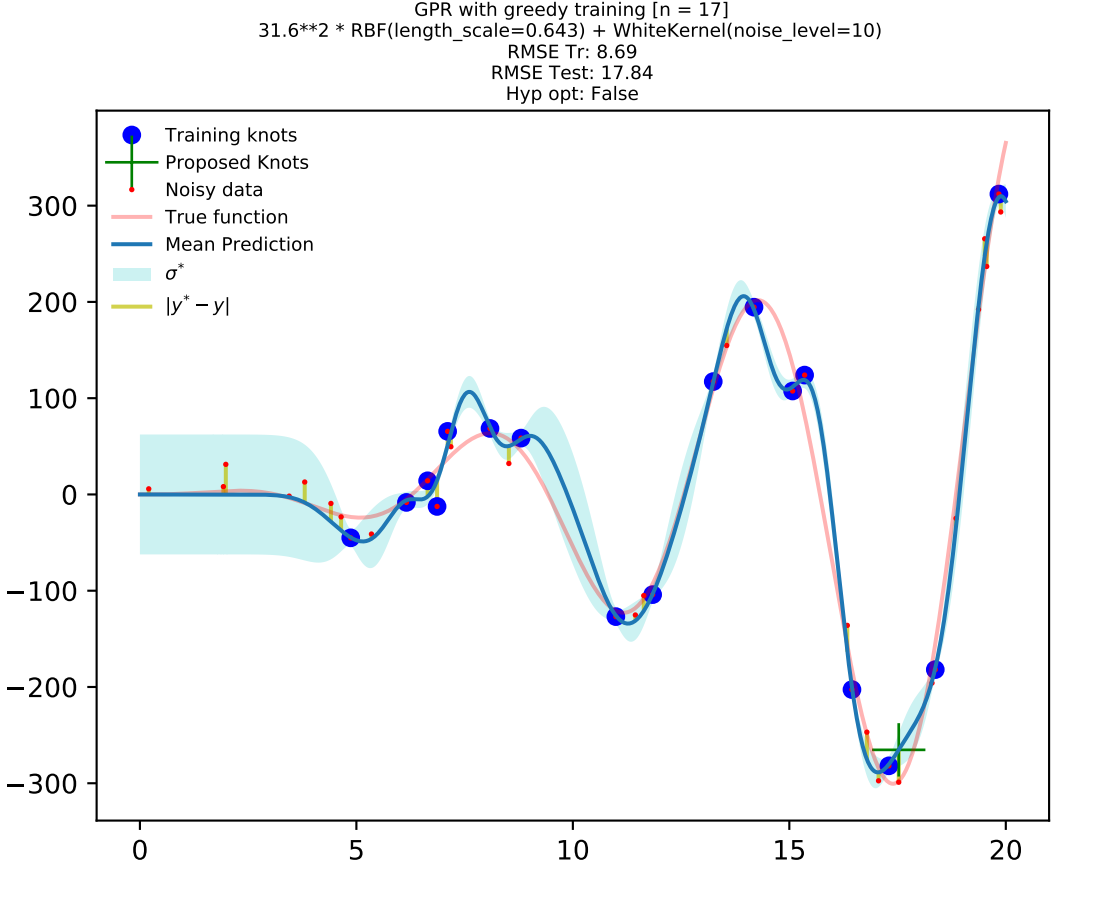
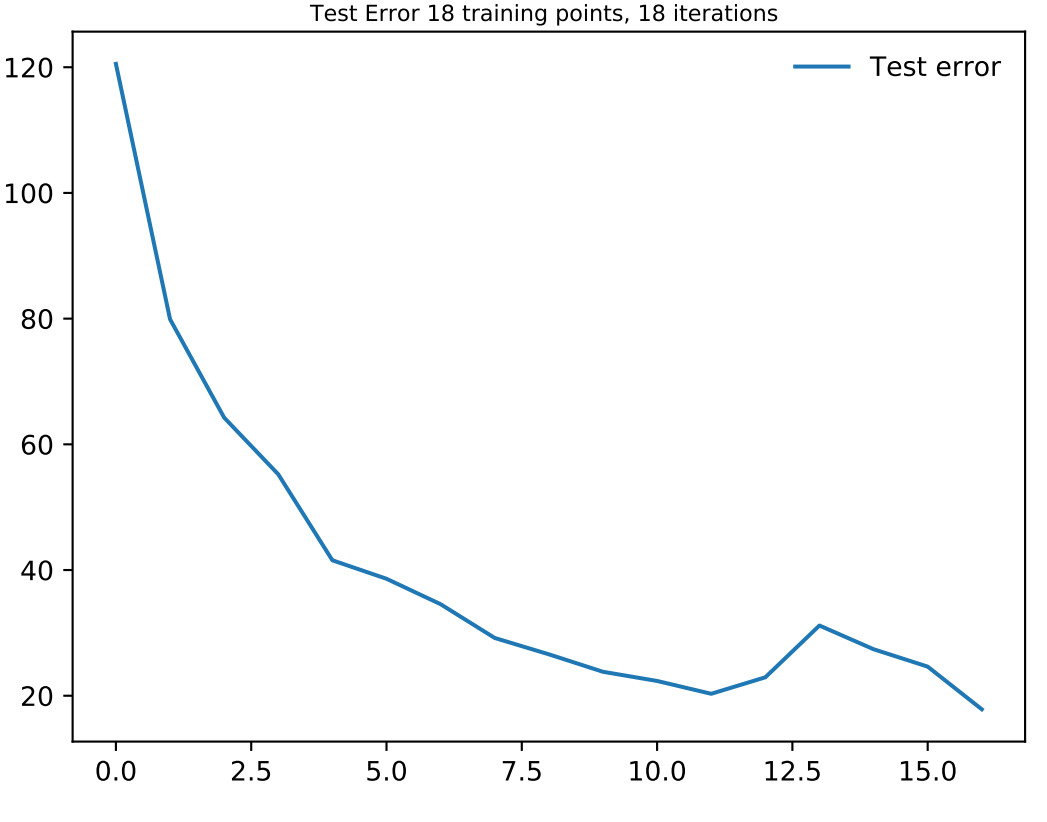

GPR with greedy training [n = 16]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 3.64
RMSE Test: 24.63
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
10
15
20


GPR with greedy training [n = 17]
31.6**2 * RBF(length_scale=0.643) + WhiteKernel(noise_level=10)
RMSE Tr: 8.69
RMSE Test: 17.84
Hyp opt: False
Training knots
Proposed Knots
Noisy data
True function
Mean Prediction
σ^*
$|y^* - y|$
300
200
100
0
−100
−200
−300
0
5
10
15
20


Test Error 18 training points, 18 iterations
Test error
120
100
80
60
40
20
0.0
2.5
5.0
7.5
10.0
12.5
15.0