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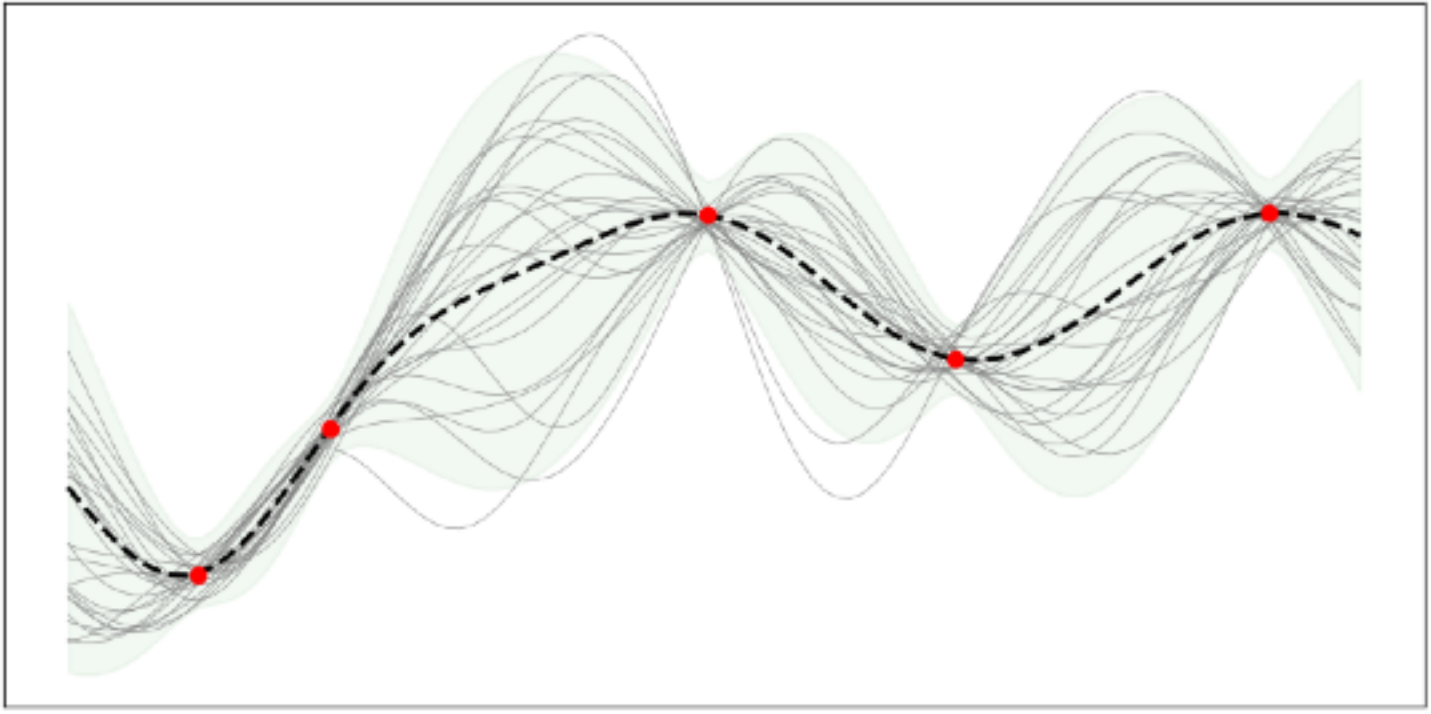
Williams, C. K. and Rasmussen, C. E. (2006). *Gaussian Processes for Machine Learning*, MIT press, Cambridge, MA.



$$f \sim GP(\mu, k)$$

Weight-Space View

$$f(x) = \phi(x)^T w, \quad w \sim N(0, \Sigma_p)$$

Function-Space View

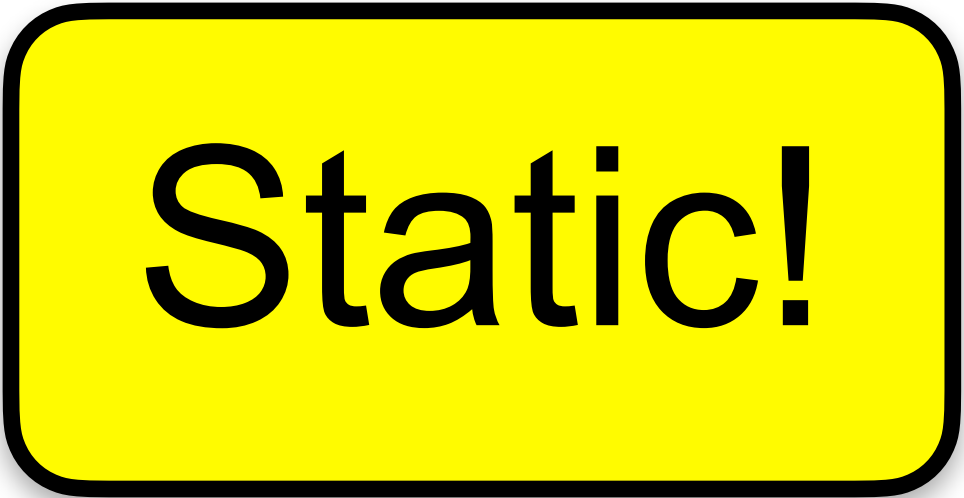
$$f(x) \sim N(\mu(x), k(x, x))$$

Posterior Predictive

$$y_* \,|\, x_*, \mathscr{D}, f \sim N(\mu_{y_*|\mathscr{D}}, K_{y_*|\mathscr{D}})$$

$$\mu_{y_*|\mathscr{D}} = \mu(X_*) + K_*^T(K + \sigma^2 I)^{-1}(y - \mu(X))$$

$$K_{y_*|\mathscr{D}} = K_*^T(K + \sigma^2 I)^{-1}K_*$$


Static!

Gaussian Processes [Static]

Gaussian Processes [Static]

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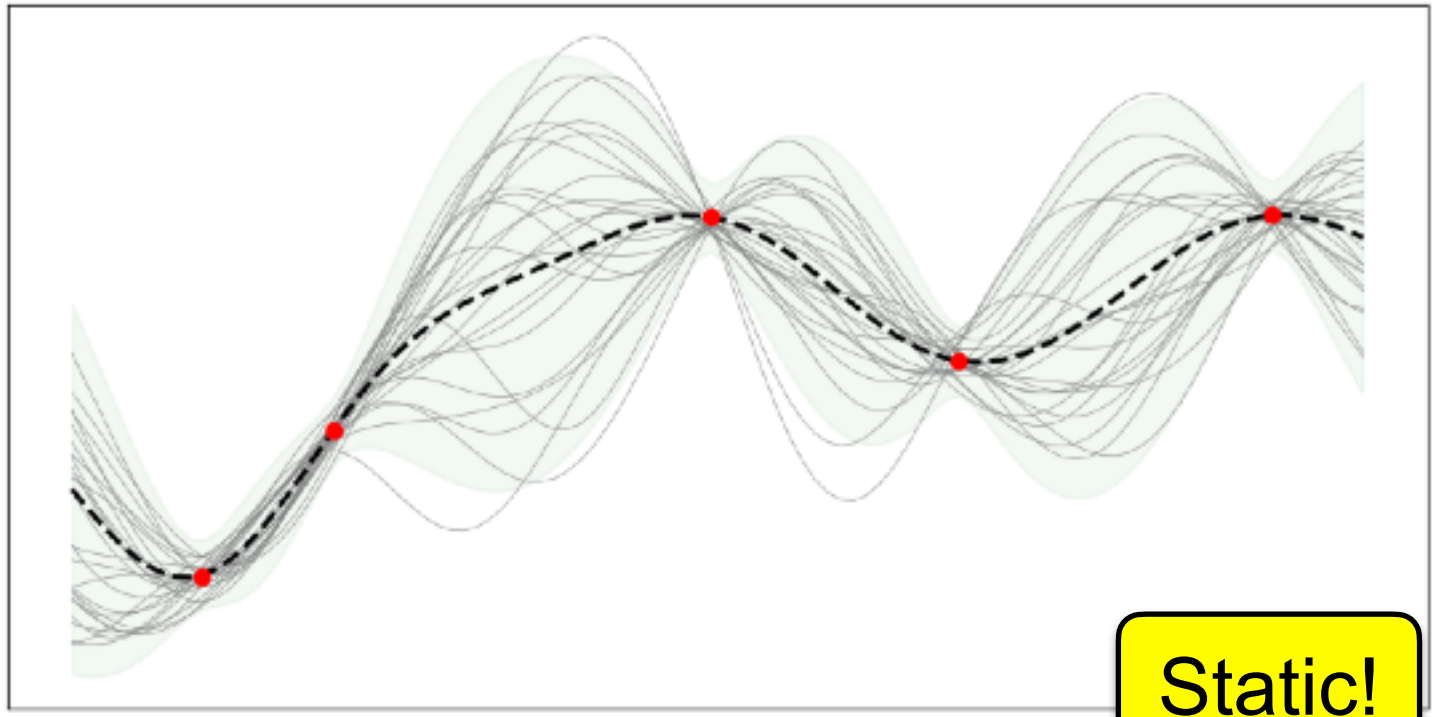
$$f \sim GP(\mu, k)$$



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Gaussian Processes [Dynamic]

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JOURNAL ARTICLE

ON STATIONARY PROCESSES IN THE PLANE

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P. WHITTLE

Biometrika, Volume 41, Issue 3-4, 3 December 1954, Pages 434–449,
https://doi.org/10.1093/biomet/41.3-4.434
Published: 03 December 1954

Whittle, P. (1954). On stationary processes in the plane, *Biometrika.* pp. 434–449.