Chapter 5: Basis Expansions and Regularization

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1. Introduction

Core concept: To augment and replace the vector of inputs X with additional variables which are transformations of X and then use the linear models in this new space of derived input features.

$$f(X) = \sum_{m=1}^{M} \beta_m h_m(X)$$

where $h_m(X) : \mathbb{R}^p \to \mathbb{R}$ is a transformation of X. This is called a linear basis expansion in X. Keepo