

REAL FUNCTION APPROXIMATORS

Why

Since the function space $R \to R$ is a vector space, can we approximate a "complex" element of this set by some basis of "simpler" functions in $R \to R$.

Of course, there may be no set that can represent f. So instead we may be interested in an element $g \in \text{span}\{g_1, \ldots, g_d\}$ which approximates f.¹

Definition

A real function approximator for a function $f: \mathbb{R} \to \mathbb{R}$ is a function $g: \mathbb{R} \to \mathbb{R}$.

¹Future editions will modify.

