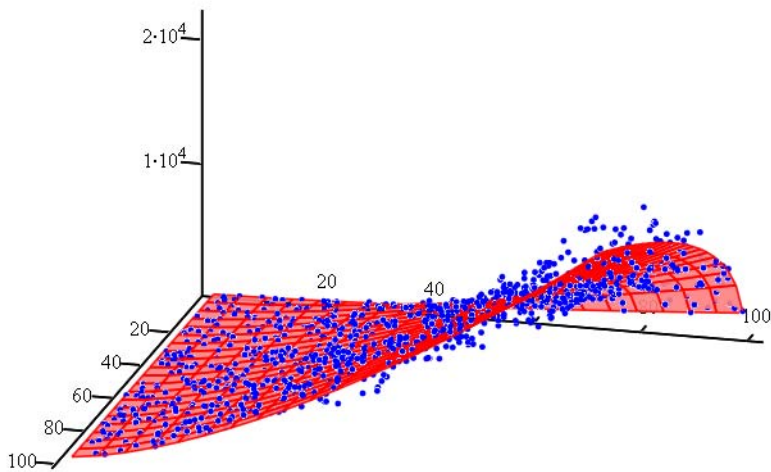


$a := 2$ $b := 0.5$ $c := 1.5$ $n := 10^3$ $f(x,y) := a \cdot x^b \cdot y^c$
 $X := \text{runif}(n, 1, 100)$ $Y := \text{runif}(n, 1, 100)$ $Z := \overrightarrow{(f(X, Y) \cdot \text{runif}(n, 0.8, 1.2))}$



$f, (X, Y, Z)$

$\text{funtype}(xy, p) := p_0 \cdot (xy_0)^{p_1} \cdot (xy_1)^{p_2}$

$\begin{pmatrix} a \\ b \\ c \end{pmatrix} := \text{multidfit} \left[\text{augment}(X, Y, Z, \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix}, \text{funtype} \right] = \begin{pmatrix} 2.137 \\ 0.497 \\ 1.488 \end{pmatrix}$

$\text{res}(a, b, c) := \overrightarrow{(a \cdot X^b \cdot Y^c - Z)}$

Given

$a := 1$ $b := 1$ $c := 1$

$\text{res}(a, b, c) = 0$

$\begin{pmatrix} a \\ b \\ c \end{pmatrix} := \text{Minerr}(a, b, c) = \begin{pmatrix} 2.137 \\ 0.497 \\ 1.488 \end{pmatrix}$

$\begin{pmatrix} \text{dummy} \\ a_ \\ b \\ c \end{pmatrix} := \text{polyfitc} \left(\text{augment} \left(\overrightarrow{\ln(X)}, \overrightarrow{\ln(Y)}, \overrightarrow{\ln(Z)}, 1 \right), \langle 1 \rangle \right) = \begin{pmatrix} \text{"Coefficient"} \\ 0.6958459 \\ 0.5020804 \\ 1.4973033 \end{pmatrix}$ $a := e^{a_} = 2.005$

$(a \ b \ c) = (2.0054 \ 0.50208 \ 1.4973)$