Regresi Polynomial.html

<html>

<head>

<title> Regresi Polynomial </title>

<script>

var jmldata = 0;

function gaus(data){

var i=0, j=0;

for( i = 0; i < 3; i++){

for( j = 0; j < 4; j++){

document.getElementById(""+(i+1)+""+(j+1)).value = data[i][j];

}

}

for( i = 0; i < 2; i++ ){

for( j = i + 1; j < 3; j++ ){

m = data[j][i] / data[i][i];

data[j][0] = data[j][0] - m \* data[i][0];

data[j][1] = data[j][1] - m \* data[i][1];

data[j][2] = data[j][2] - m \* data[i][2];

data[j][3] = data[j][3] - m \* data[i][3];

}

}

var hasil = [];

for( i = 2; i >= 0; i-- ){

var total = 0;

for( j = 2; j > i; j-- ){

total = total + ( data[i][j] \* hasil[j] );

}

hasil[i] = ( data[i][3] - total ) / data[i][i];

}

for( i = 0; i < 3; i++ ){

document.getElementById(""+(i+1)).value = hasil[i];

}

var nilai;

for(i=0; i < jmldata; i++){

nilai = parseFloat(document.getElementById("x"+(i)).value);

y = Math.pow(nilai, 0)\*hasil[0] + Math.pow(nilai, 1)\*hasil[1] + Math.pow(nilai, 2)\*hasil[2];

//console.log(y);

document.getElementById("rp"+i).value = y;

}

}

function input(){

jml = parseFloat(document.getElementById("jml").value);

if(jmldata==0){

var br = document.createElement("br");

var x = document.createElement("INPUT");

x.setAttribute("type", "text");

x.setAttribute("value", "X");

x.setAttribute("size", "2");

var y = document.createElement("INPUT");

y.setAttribute("type", "text");

y.setAttribute("value", "Y");

y.setAttribute("size", "2");

var rp = document.createElement("INPUT");

rp.setAttribute("type", "text");

rp.setAttribute("value", "Regresi Polynomial");

var rl = document.createElement("INPUT");

rl.setAttribute("type", "text");

rl.setAttribute("value", "Regresi Linier");

var sme = document.createElement("INPUT");

sme.setAttribute("type", "text");

sme.setAttribute("value", "Mean Square Error");

document.getElementById('list').appendChild(x);

document.getElementById('list').appendChild(y);

document.getElementById('list').appendChild(rp);

document.getElementById('list').appendChild(rl);

document.getElementById('list').appendChild(sme);

document.getElementById('list').appendChild(br);

}

for(var i=jmldata;i<jmldata+jml;i++){

var br = document.createElement("br");

var x = document.createElement("INPUT");

x.setAttribute("type", "text");

x.setAttribute("id", "x"+i);

x.setAttribute("value", i+1);

x.setAttribute("size", "2");

var y = document.createElement("INPUT");

y.setAttribute("type", "text");

y.setAttribute("id", "y"+i);

y.setAttribute("size", "2");

var rp = document.createElement("INPUT");

rp.setAttribute("type", "text");

rp.setAttribute("id", "rp"+i);

var rl = document.createElement("INPUT");

rl.setAttribute("type", "text");

rl.setAttribute("id", "rl"+i);

var sme = document.createElement("INPUT");

sme.setAttribute("type", "text");

sme.setAttribute("id", "mse"+i);

document.getElementById('list').appendChild(x);

document.getElementById('list').appendChild(y);

document.getElementById('list').appendChild(rp);

document.getElementById('list').appendChild(rl);

document.getElementById('list').appendChild(sme);

document.getElementById('list').appendChild(br);

}

jmldata+=jml;

}

function hitung(){

var data = [[],[],[],[]];

x = [];

y = [];

for(var i=0;i<jmldata;i++){

x[i] = parseFloat(document.getElementById("x"+(i)).value);

y[i] = parseFloat(document.getElementById("y"+(i)).value);

}

for(var i=0;i<3;i++){

data[i][0] = hit(x, 0+i);

data[i][1] = hit(x, 1+i);

data[i][2] = hit(x, 2+i);

data[i][3] = hitY(x, y, i);

}

gaus(data);

RegresiLinier();

MSE();

}

function hit(x, pangkat){

total =0;

for(var i=0;i<jmldata;i++){

total += Math.pow(x[i], pangkat);

}

return total;

}

function hitY(x, y, pangkat){

total =0;

for(var i=0;i<jmldata;i++){

total += (Math.pow(x[i], pangkat) \* y[i]);

}

return total;

}

function RegresiLinier(){

var totX = 0, totY = 0, totXY = 0, totX2 = 0, pembilang, penyebut, M, rataY, rataX, C, X, Y;

for(var i = 0;i<jmldata;i++){

x = parseFloat(document.getElementById("x"+(i)).value);

y = parseFloat(document.getElementById("y"+(i)).value);

totX=x+totX;

totY=y+totY;

totXY=x\*y+totXY;

totX2=x\*x+totX2;

}

pembilang = (jmldata\*totXY)-(totX\*totY);

penyebut = jmldata\*totX2-totX\*totX;

M = pembilang/penyebut;

rataX = totX/jmldata;

rataY = totY/jmldata;

C = rataY - M\*rataX;

for(i=0; i < jmldata; i++){

nilai = parseFloat(document.getElementById("x"+(i)).value);

// console.log(Y+"="+M+"\*"+nilai+"+"+C);

Y = M\*nilai+C;

document.getElementById("rl"+i).value = Y;

}

}

function MSE(){

for(i=0; i < jmldata; i++){

y = parseFloat(document.getElementById("y"+(i)).value);

rpx = parseFloat(document.getElementById("rp"+(i)).value);

mse = y - rpx;

document.getElementById("mse"+i).value = mse;

}

}

</script>

</head>

<body>

<div id="list" style="float:left;border:1px solid black;">

</div>

<div style="float:left;margin-left:15px;">

Masukkan Jumlah Data

<input type="text" id="jml" value="">

<input type="button" onclick="input()" value="Input" style="width:100px"><br><br>

<form action="#">

<input type="text" id="11" size="4"> &nbsp;&nbsp;

<input type="text" id="12" size="4"> &nbsp;&nbsp;

<input type="text" id="13" size="4"> &nbsp;=&nbsp;

<input type="text" id="14" size="4"><br><br>

<input type="text" id="21" size="4"> &nbsp;&nbsp;

<input type="text" id="22" size="4"> &nbsp;&nbsp;

<input type="text" id="23" size="4"> &nbsp;=&nbsp;

<input type="text" id="24" size="4"><br><br>

<input type="text" id="31" size="4"> &nbsp;&nbsp;

<input type="text" id="32" size="4"> &nbsp;&nbsp;

<input type="text" id="33" size="4"> &nbsp;=&nbsp;

<input type="text" id="34" size="4">&nbsp;&nbsp;&nbsp;&nbsp&nbsp;&nbsp;&nbsp;&nbsp<br>

</form>

<div style="text-align:left;">

A = <input type="text" id="1" size="4"> &nbsp;&nbsp; <br><br>

B = <input type="text" id="2" size="4"> &nbsp;&nbsp; <br><br>

C = <input type="text" id="3" size="4"> &nbsp;&nbsp; <input type="button" onclick="hitung();" value="Hitung" style="width:100px"> <br><br>

</div>

</div><br>

</body>

</html>

