Test\_1.m

%一维搜索求最优解算法

ii = 1;%迭代次数

AA = 212;%效用最大时A值的下临界值

%二次规划求解

data\_dR = data\_R';

f = fuF .\* data\_dR;

H = zeros(114,114);

for i = 58:114

H(i,i) = AA\*(1/(i-57));

end

Aeq = F';

Beq = 1;

lb = zeros(114,1);

B = fuF(1:57,1) .\* data\_dR(1:57,1);

%A在工作区自己定义

[xx,fval,exitflag,output,lambda] = quadprog(H,f,A,B,Aeq,Beq,lb);

xxx = xx';

result = zeros(1,100);

up\_fval = fval + 0.0001;%规定区间上界

while fval <= up\_fval

data\_dR = data\_R';

f = fuF .\* data\_dR;

H = zeros(114,114);

for i = 58:114

H(i,i) = AA\*(1/(i-57));

end

Aeq = F';

Beq = 1;

lb = zeros(114,1);

B = fuF(1:57,1) .\* data\_dR(1:57,1);

%A在工作区自己定义

[xx,fval,exitflag,output,lambda] = quadprog(H,f,A,B,Aeq,Beq,lb);

xxx = xx';

vvalue = 24675114.49 \* xxx(1,1:57);%分配的钱

result(1,ii) = vvalue \* vvar';

ii = ii + 1;

AA = AA + 0.001;

end

iii = 2;

min\_var = result(1);

min\_number = 1;

%风险价值最小的值和迭代次数

while result(1,iii) ~= 0

if result(1,iii) < result(1,iii - 1)

min\_var = result(1,iii);

min\_number = iii;

iii = iii + 1;

end

end

AA = AA + 0.01\*(min\_number - 1);

%求出此时的最优分配方案

data\_dR = data\_R';

f = fuF .\* data\_dR;

H = zeros(114,114);

for i = 58:114

H(i,i) = AA\*(1/(i-57));

end

Aeq = F';

Beq = 1;

lb = zeros(114,1);

B = fuF(1:57,1) .\* data\_dR(1:57,1);

%A在工作区自己定义

[xx,fval,exitflag,output,lambda] = quadprog(H,f,A,B,Aeq,Beq,lb);

best\_solve = xx';

Test\_2.m

%拟合预测的函数

lastday = 244;%最后的天数

lastpride =13.13;%最后的价格

R = zeros(3,1);

R(1,1) = log(solve(lastday+45)/lastpride)/45;

R(2,1) = log(solve(lastday+90)/lastpride)/90;

R(3,1) = log(solve(lastday+180)/lastpride)/180;

R %输出不同天数后的预测值

%用cftool拟合后将参数信息写入fx中

function fx = solve(x)

p1 = -9.722e-16;

p2 = 9.075e-13;

p3 = -3.346e-10;

p4 = 6.139e-08;

p5 = -5.76e-06;

p6 = 0.0002503;

p7 = -0.003844;

p8 = 0.06599;

p9 = 11.6;

fx = p1\*x^8 + p2\*x^7 + p3\*x^6 + p4\*x^5 + p5\*x^4 + p6\*x^3 + p7\*x^2 + p8\*x + p9;

end