**线性回归**

**public** **class** Line {

**public** **static** **double** [] getLinePara(Double [] [] points ) {

**double** dbRt [] =**new** **double** [2];

**double** dbXSum=0;

**for**(**int** i=0;i<points[0].length;i++) {

dbXSum=dbXSum+points[0][i];

}

**double** dbXAvg=dbXSum/points[0].length;

**double** dbWHeadVal=0;

**for**(**int** i=0;i<points[0].length;i++) {

dbWHeadVal=dbWHeadVal+(points[0][i]-dbXAvg)\*points[1][i];

}

**double** dbWDown=0;

**double** dbWDownP=0;

**double** dbWDownN=0;

dbXSum=0;

**for**(**int** i=0;i<points[0].length;i++) {

dbWDownP=dbWDownP+points[0][i]\*points[0][i];

dbXSum=dbXSum+points[0][i];

}

dbWDown=dbWDownP-(dbXSum\*dbXSum/points[0].length);

**double** dbW=dbWHeadVal/dbWDown;

dbRt[0]=dbW;

**double** dbBSum=0;

**for**(**int** i=0;i<points[0].length;i++) {

dbBSum=dbBSum+(points[1][i]-dbW\*points[0][i]);

}

**double** dbB=dbBSum/points[0].length;

dbRt[1]=dbB;

**return** dbRt;

}

**public** **static** **void** main(String[] args) {

Double [][] arrPoints= {{1.0,2.0,3.0,5.0},{1.0,2.0,3.0,5.0}};

/\*\* 预测 w为1 b为0\*/

System.***out***.println(*getLinePara*(arrPoints)[0]);

System.***out***.println(*getLinePara*(arrPoints)[1]);

/\*\*测试结果与预测相同\*/

}

}