Kaiyin, please test like the instructions as below:

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| **.C folder** | **.m file** | **Input variable** | **Output variable** | **Example** |
| dataRead | dataRead.m | test1 | test\_obtData | test\_obtData=dataRead(test1); |
| findBoxspeed | findBoxspeed.m | test\_obtData(:,2) | speed\_box | speed\_box=findBoxspeed(test\_obtData(:,2)); |
| checkBox | checkBox.m | ref\_speed\_box,speed\_box,variation\_box | box\_stat  It may be either 1 or 0 or -1 | box\_stat=checkBox(ref\_speed\_box,speed\_box,variation\_box); |
| find\_resultant | find\_resultant.m | test\_obtData | resultant | resultant = find\_resultant(test\_obtData); |
| findCV | findCV.m | resultant | cvVal | cvVal=findCV(resultant); |
| adjustRollerData | adjustRollerData.m | roller\_resultant,size(test\_obtData,1)  size(test\_obtData,1) = 238 | roller\_resultantAdjust | roller\_resultantAdjust=adjustRollerData(roller\_resultant,size(test\_obtData,1)); |
| filterRollerEffect | filterRollerEffect.m | resultant,roller\_resultantAdjust,roller\_type    roller\_type may be either 'always' or 'conditional' | roller\_removed | roller\_removed = filterRollerEffect(resultant,roller\_resultantAdjust,roller\_type); |
| checkMetal | checkMetal.m | cvVal,ref\_cv,variation\_cv | metal\_stat  metal\_stat may be either '1' or '0' | metal\_stat= checkMetal(cvVal,ref\_cv,variation\_cv); |
| checkLargeNoiseMetal | checkLargeNoiseMetal | cvVal,max\_cv | largenoisemetal\_stat  largenoisemetal\_stat  May be either '1'or '0' | largenoisemetal\_stat=checkLargeNoiseMetal(cvVal,max\_cv); |