

- + DepthEstimator():
- + ~DepthEstimator():
- + estimateDepth(bbs: vector<vector<int>>, humanHeight: double,intrinsicParams: vector<double>): vector<double>
- + estimateDepth(bbs: vector<vector<int>>, humanHeight: double,intrinsicParams: vector<double>): vector<vector<double>>

## Transformation - transform:Eigen::Matrix4f\* + Transformation(): + ~Transformation(): + getTransform(): vector<double> + transformToRoboFrame(vector<double>): vector<double - cameraCords: vector<double> + Robot(path: string): void + ~Robot(void):void + processData(void): void

## DetTrack

- trackers: cv::Ptr<MultiTracker>
- trackersBbox: vector<vector<int>>
- yoloModel: cv::dnn::Net
- imageWidth: int
- imageHeight: int
- detectedObjects: vector<cv::Mat>
- confThreshold: float
   nmsThreshold: float
- count: int
- + DetTrack(configPath: string, weightsPath: string)
- + ~DetTrack()
- + addTrackers(inImg: cv::Mat\*, bbDet: vector<vector<int>>,bbtrack: vector<vector<int>>):void
- + detectHumans(inImg: cv::Mat\*): vector<vector<int>>
- + TrackHumans(inImg: cv::Mat\*): vector<vector<int>>

## Preprocessor

+ preprocess(size: pair<int,int>, blurKernel: int, inImg: cv::Mat, outImg: cv::Mat): void

## **IOHandler**

- inPath: string
   outPath: string
- modelConfigPath: string
- modelWeightsPath: string
- islmg: bool
   ifVisualize: bool
- record: bool
- humanHeight: int
- intrinsicParams: vector<double>
- imgWidth: int - imgHeight: int
- + yoloWidth: int
- + yoloHeight: int
- + IOHandler(cfgPath: string):
- + ~IOHandler(): void
- + argParse(cfgPath: string): void
- + getInputType(void): bool
- + isVisualize(void): bool
- + ifRecord(void): bool
- + getModelConfigPath(): string
- + getModelWeightsPath(): string
- + getInFilePath(void): string
- + getOutFilePath(void): string
- + getHumanHeight(): int
- + getIntrinsics(): vector<double>
- + getImgWidth(): int
- + getImgHeight(): int
- + drawBb(bb: vector<vector<int>>, frame: cv::Mat):void
- + seeImg(frame: cv::Mat): void
- + saveImg(path: string, frame: cv::Mat): void