SensorIO

- imagePath: string
- videoPath: string
- outputWidth: int
- outputHeight: int
- + SensorIO(): void
- + setOutputWidth(int width): void
- + setOutputHeight(int height): void
- + getOutputWidth(): int
- + getOutputHeight(): int
- + setImagePath(string path): void
- + setVideoPath(string path): void
- + getImagePath(): string
- + getVideoPath(): string
- + getDataType(cv::CommandLineParser parser): string
- + getDataPath(cv::CommandLineParser& parser, string& dataType): string
- + imageProcessor(string& rwoperation, cv::Mat frame): cv::VideoCapture
- + videoProcessor(string& ops, cv::Mat frame, cv::VideoWriter video): cv::VideoCapture

HumanDetection

- inputWidth: int
- inputHeight: int
- averageHeight: int
- confidenceThreshold: int
- nmsThreshold: int
- humanBoxes: vector < cv::Rect >
- + HumanDetection(): void
- + setInputWidth(int width): void
- + setInputHeight(int height): void
- + setConfidenceThreshold(float confidThres): void
- + setNmsThreshold(float nmsThres) : void
- + getInputWidth(): int
- + getInputHeight(): int
- + setConfidenceThreshold(): float
- + getNmsThreshold(): float
- + drawBox(int classId, float conf, int left, int top, int right, int bottom, const cv::Mat &frame, std::vector<std::string> classes, double distance) : void
- + void eliminateBox(cv::Mat &frame, const std::vector<cv::Mat> &outs, float confThreshold, const std::vector<std::string> &classes) : void
- + getOutputNames(cv::dnn::Net& net): vector<string>
- + HumanDetection::humanDetection(cv::CommandLineParser parser, SensorIO io, HumanDetection human_detection, YoloConfig config): void
- + humanDistance(int averageHeight, int boxHeight, double focalLength, double sensorHeight, int frameHeight): double
- + humanPosition(cv::Rect box, double distance) : void



FrameTransformation

- transformationMatrix: vector<vector <double>>
- + FrameTransformation(): void
- + setTransformationMatrix(vector<vector<double>> matrix): void
- + getTransformationMatrix(): vector<vector<double>>
- + transformFrame(vector<double> position): vector<double>

YoloConfig

- yoloClasses: vector<string>
- voloClassesLocation: string
- yoloConfigurationFile: string
- yoloWeightFile: string
- + YoloConfig()
- + getYoloClasses(): vector<string>
- + setYoloClasses(vector<string>): void
- + getYoloClassesLocation(): string
- + setYoloClassesLocation(string): void
- + getYoloConfigurationFile(): string
- + setYoloConfigurationFile(string): void
- + getYoloWeightFile(): string
- + setYoloWeightFile(string): void