Robot

- net_input_shape : vector<int>
- transformation matrix : Matrix4d
- focal length : double
- height of human : double
- pixel height of human : double
- + detectHumans(Mat, Net): vector<Rect>
- + loadNetwork(string, string): Net
- + prepFrame(Mat) : Mat
- + getShape(): vector<int>
- + setTranformationMatrix(Matrix4d): void
- + getTransformationMatrix(): Matrix4d
- + transformToRobotFrame(vector<Rect>): vector<Rect>
- + calculateDepth(Rect) : double
- + getFocalLength(): double
- + setFocalLength(double): void

Note:

Mat, Rect and Net are composite datatypes used from OpenCV packages. Matrix4d is a composite datatype used fro Eigen 3 package.

HumanDetector

- confidence threshold : double
- nms threshold : double
- human_detection_label : int
- + detection(Net, Mat&) : vector<Mat>
- + postProcess(Mat&, vector<Mat>&) : vector<Rect>
- + drawBoundingBoxes(double, int, int, int, int, Mat&, int): int
- + getOutputsNames(Net&) : vector<string>
- + setConfidenceThreshold(double) : void
- + getConfidenceThreshold(): double
- + setNmsThreshold(double) : void
- + getNmsThreshold() : double