Human Detection and Tracking

Aneesh Chodisetty, Bhargav Kumar Soothram, Joseph Katakam

Overview

- Design a human detection and tracking for ACME robotics.
- The algorithm is designed to use a monocular camera and YOLOv5 for detecting and tracking humans in the picture.

Design Practices

- Agile Iterative process for software development.
- Language : C++14 or above.
- Developer-level documentation.
- Unit tests using Goggle test suite.
- Travis for CI.
- Coverals for code coverage.

System Design

- Images are sent to YOLOv5.
- The identified objects are then filtered and tracked across multiple frames.
- The identified object's frame is then transformed to the robot's perspective.

Project planning

- Class development   : 10/14/22
- Review and Bug fixes   : 10/16/22
- Unit Testing   : 10/19/22
- Review and corrections   : 10/21/22
- System Testing   : 10/23/22
- Bug fixes   : 10/25/22
- Final Release   : 10/26/22