



Human Detection and Tracking

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Overview

- Design a human detection and tracking for ACME robotics.
- The algorithm is designed to use a monocular camera and YOLOv3 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 Google test suite.
- GitHub for CI.
- Coveralls for code coverage.

System Design

- Images are sent to YOLOv3.
- 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

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|--------------------------|------------|
| • Class development | : 10/14/22 |
| • Review and Bug fixes | : 10/16/22 |
| • Unit Testing | : 10/17/22 |
| • Review and corrections | : 10/21/22 |
| • System Testing | : 10/25/22 |
| • Bug fixes | : 10/28/22 |
| • Final Release | : 10/29/22 |