PROJECT REQUIRED RESOURCES & DEVELOPMENT ENVIRONMENT

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Required Resources

Software:
- Github for source control
- iOS Developer License
- Python & Swift
- Xcode & Visual Studio

Hardware:
- Harness
- (possible) Raspberry pi + attachments

YOLO (you only look once) Algorithm:
- YOLOv5s
BASE PROGRAM STRUCTURE

- Based off YOLO algorithm
  - Requires further object training
  - Required accuracy improvement
  - Requires lighting condition improvement
FUTURE

- Detect more relevant objects
- Increase detection accuracy
- Improve accuracy with different lighting
DESIGN

- iOS
  - Simple user friendly interface
  - Design using Xcode

- Raspberry Pi
  - Plug-In-Play
  - Minimal interaction
WHAT WE ARE WORKING ON:

**JOSE**
Project specification and brief.

**EDUARDO**
Identify defects and resolve bugs.

**FRANKIE**
Production and technical support.

**ENRIQUE**
Design, document, and prototype.
PROJECT STAGES

Stage 1
Create base program structure for project

Stage 2
Train algorithm to detect relevant objects

Stage 3
Modify algorithm to improve accuracy and lighting conditions

Stage 4
Finalize and maintain algorithm
**ESTIMATED** TIMELINE

- **Nov. 19, 2021**: Base program structure
- **Dec. 10, 2021**: Full program completion
- **Jan. 28, 2022**: Testing programs accuracy and features
- **Feb. 1, 2022**: Start building app/hardware