LT4 - Project Planning

Slow Pitch Softball Detector Team 2 - Pitch Perfect

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Project Overview

Pitch Perfect is a device/app designed to track softball pitches and determine their legality based on height, ensuring fair play, safety, and aiding player development.


Objectives:

- Improve communication of pitch legality to players and coaches.
- Provide umpires with reliable data for consistent decision-making.
- Enhance overall player experience and development in slow-pitch softball.

Project Management

- ● **Waterfall Elements**
  - ○ Fixed timeline
  - ○ Sequential progression one phase must be completed before the next phase
  - ○ Large amount of planning required
- ● **Agile Elements**
  - ○ Weekly client/adviser meetings
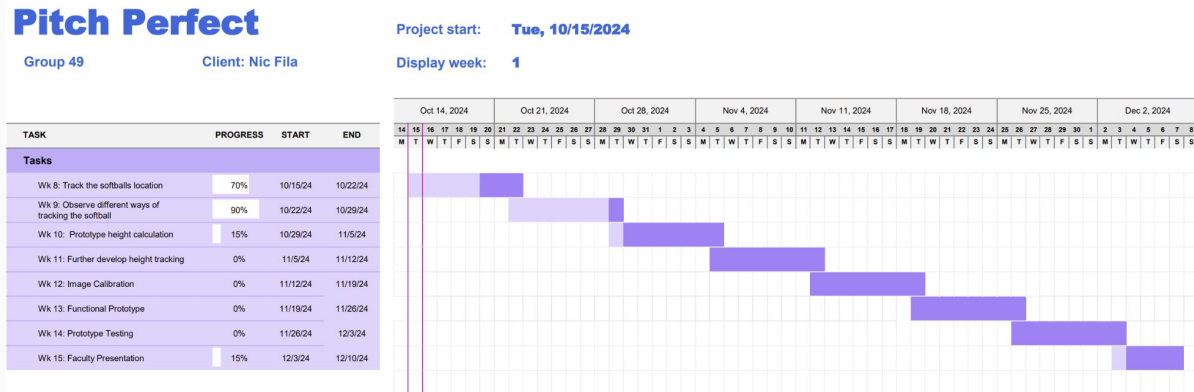 - ○ User interface development
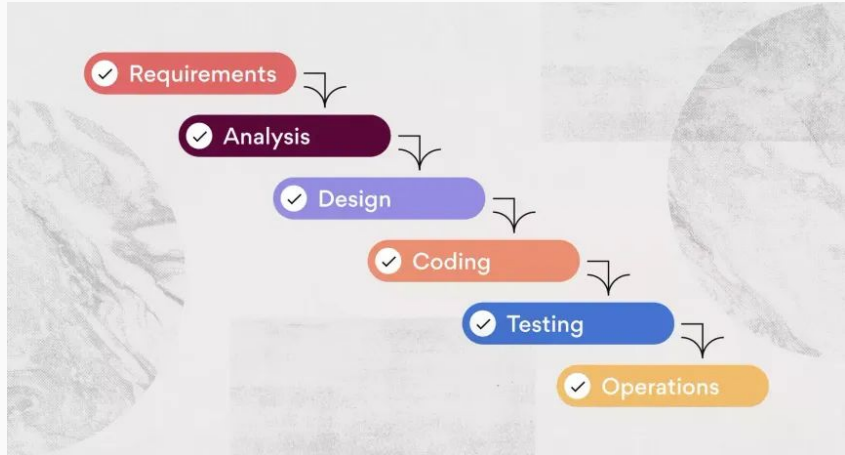
Task Decomposition

- To aid in our Waterfall style management we have created a task decomposition list to lay out our achievable tasks to complete by the end of this semester to deliver a prototype
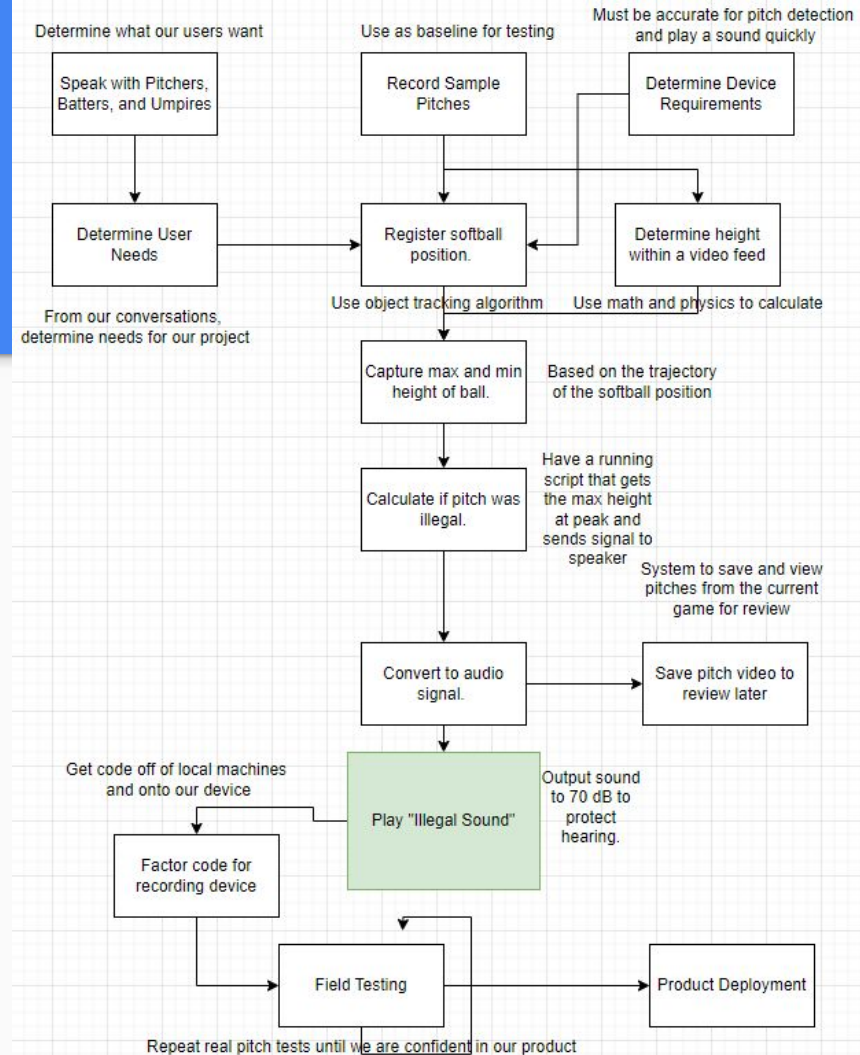
Key Milestones

- Accurately track the position in frame of a softball in motion. Has to work in multiple different lighting conditions (day/night)
- Correlating the position of the ball in frame to the current height of the ball in real time
- Creating a frontend for the user to interface with the script

Pitch Perfect

Group 49   Client: Nic Fila

Project start: **Tue, 10/15/2024**

Display week: **1**

TASK	PROGRESS	START	END
Tasks			
Wk 8: Track the softballs location	70%	10/15/24	10/22/24
Wk 9: Observe different ways of tracking the softball	90%	10/22/24	10/29/24
Wk 10: Prototype height calculation	15%	10/29/24	11/5/24
Wk 11: Further develop height tracking	0%	11/5/24	11/12/24
Wk 12: Image Calibration	0%	11/12/24	11/19/24
Wk 13: Functional Prototype	0%	11/19/24	11/26/24
Wk 14: Prototype Testing	0%	11/26/24	12/3/24
Wk 15: Faculty Presentation	15%	12/3/24	12/10/24

Key Risks and Mitigation Strategies

Risks

- Sun/Field lights disrupting the camera
- Winter will halt our outdoor testing
- Ease of use for both calibration and cost for players and the league

Strategies

- Develop an algorithm to calibrate to the light of a given time
- Gather lots of initial test footage with known measurements for testing
- Test on a cheap device first before spending on external devices
- Determine exact calibration measurements that are needed from users

Conclusion

- Utilizing hybrid management style
- Established timeline with key points in the project
- Considered risks and potentials consequences if those risks aren't mitigated