Team 309: Sprinter Optimization

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Introduction

What makes a good runner?

- Genetics
- Technique
- Proper Training

Why it’s hard to mold a great runner

- It's not easy identify a runners potential
- It is hard to improve technique when you cannot watch yourself run
- The tools that coaches use to train their runners are limited

Project Scope

- The goal of this project is to create a system that analyzes the form and technique of sprinters and provide a clear display of the sprinter while giving feedback on their form.

Goals

- Provide feedback and visual output of sprinter.
- Create a device that is easy to use and cost effective.
- Create a device that is lightweight, water resistant, and durable.

Project Scope

Markets

- Primary: track and field coaches and university teams.
- Secondary: athletes in different sports and recreational athletes.

Assumptions

- This device will be used for competitive and collegiate athletes.

Stakeholders

- FSU Track and Field
- FAMU-FSU College of Engineering
- Dr. Hooker (Advisor)

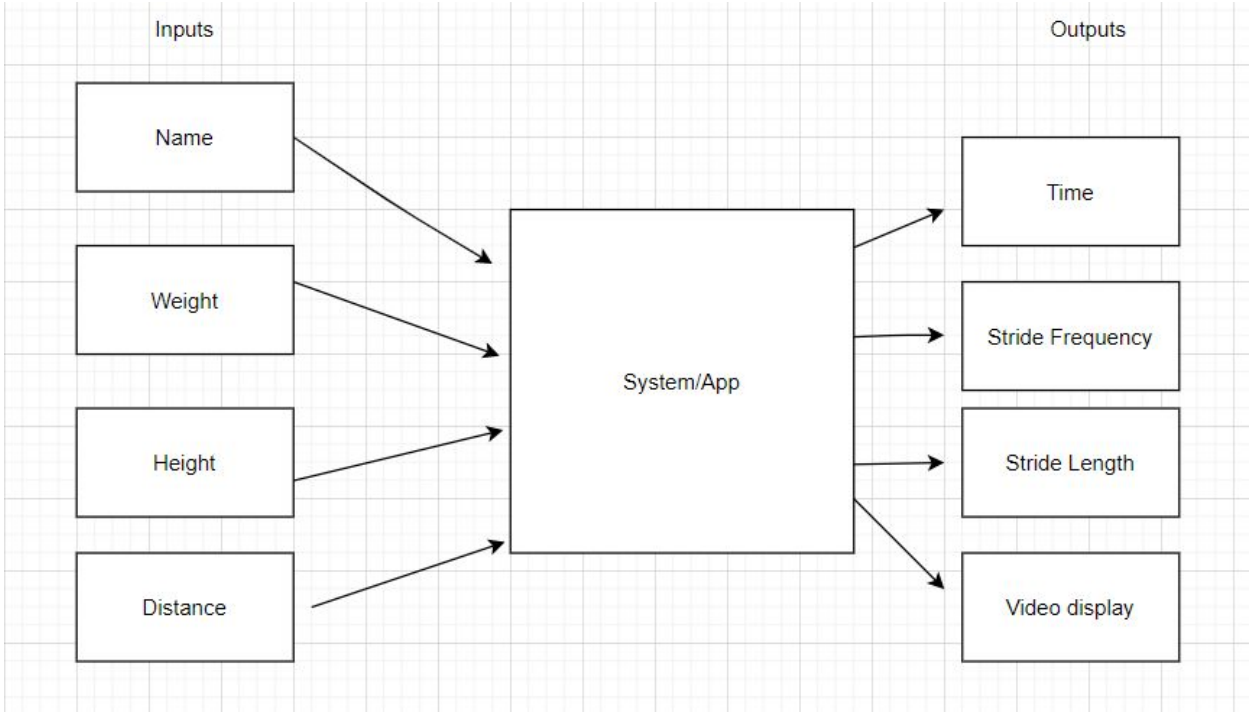
Customer Needs

Number	Needs
1	This device will improve the performance of an elite sprinter.
2	The device will produce feedback immediately and will be convenient to use on the track
3	The software will collect quantitative data about the runner
4	This device will not affect the runner and will withstand sweat
5	This device will be inexpensive

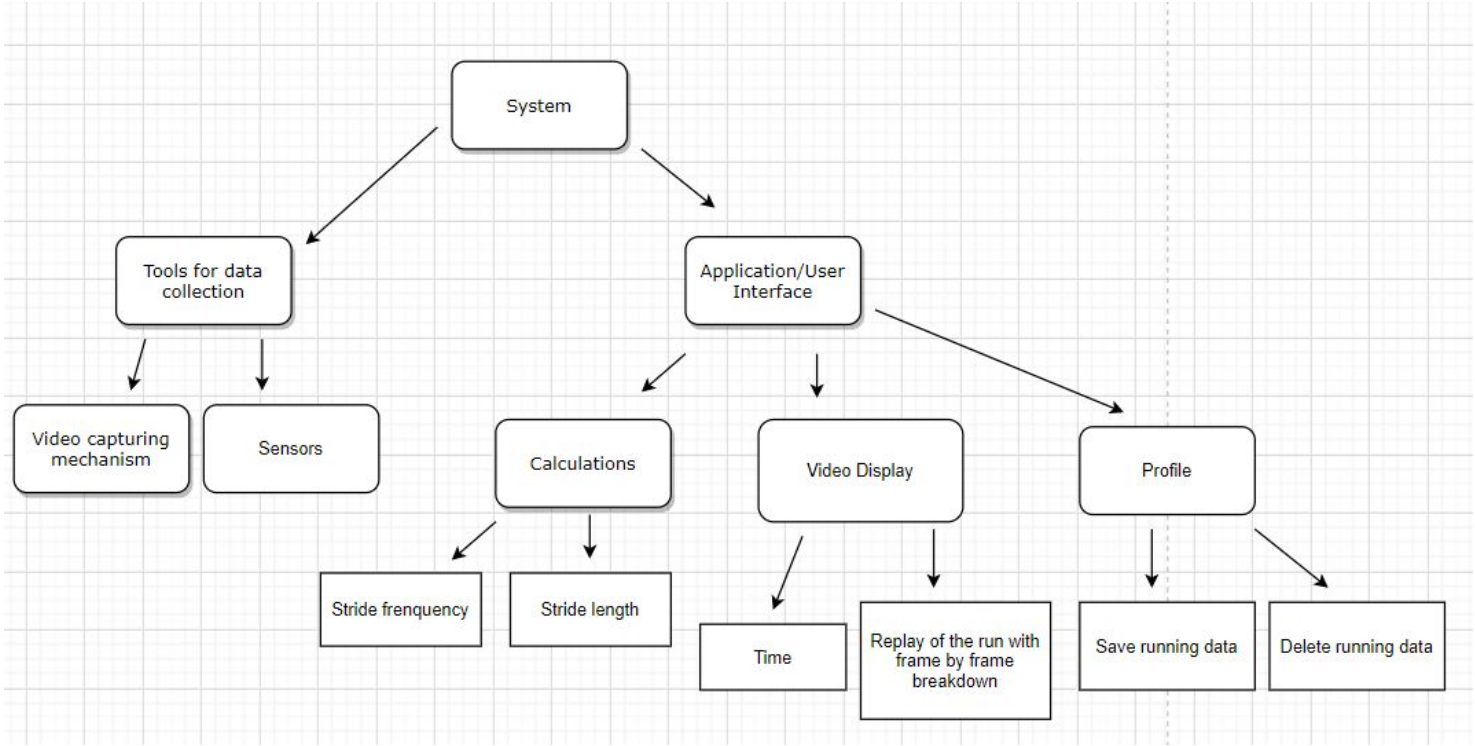
Customer Needs

Number	Needs	Requirement
1	1,3,5	Detect both efficient and inefficient sprinting form/technique
2	1,2,3	Live video output and data collected displayed
3	4,	Lightweight and durable
4	2	Fast and easily accessible on a mobile device
5	3	User inputs for specific data about runner
6	5	Cost effective

Functional Decomposition



Functional Decomposition



Summary

- Our goal is to create a system that can analyze the form of a sprinter and display quick feedback on specific statistics of the run
- System requirements
  - Lightweight, durable, and cost efficient
  - Sensors and camera to gather data
  - Mobile app for quick and convenient feedback

Thank you

- Dr. Hooker and Dr. Chuy
- Erik Myyra

Questions?