

Milestone 1

Smart Stride

by Cianna Grummer

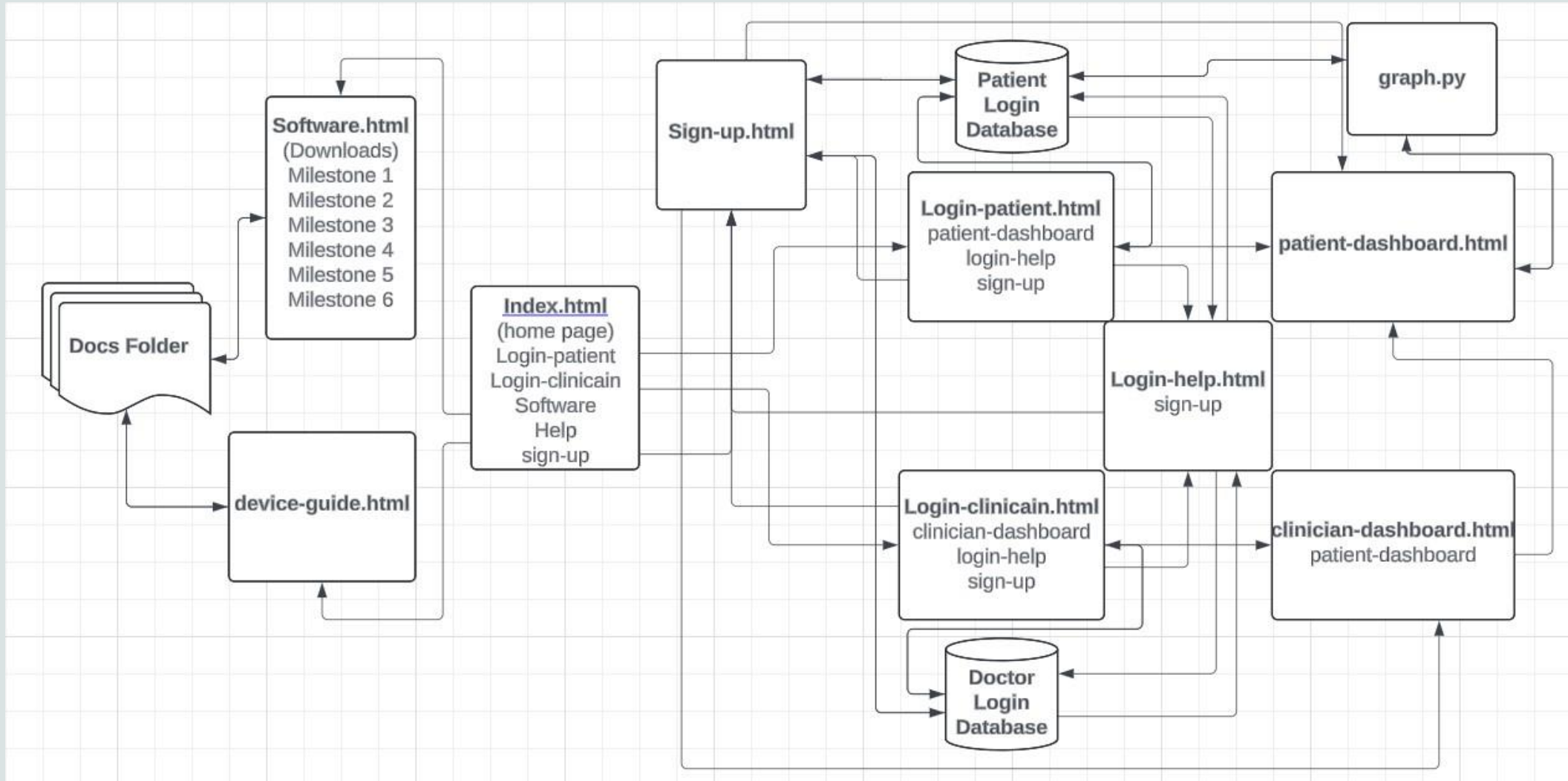


Progress

Task	Completion	To Do
Create Website Skeleton	100%	Completed
Set up Database through RDS	100%	Completed
Create Database Schema	100%	Completed
Create Database Tables for Doctors and Patients with demo	100%	Completed
Design Document	100%	Completed
Requirements Document	100%	Completed
Test Plan	100%	Completed



Website Skeleton



Team Feedback

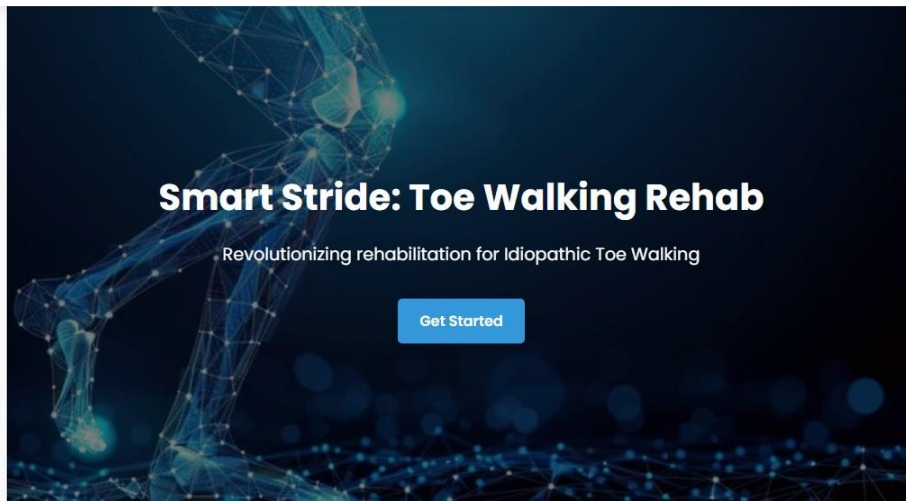
- Improve the visuals of the UI
- Add Section for a motion capture video to be displayed under a patient's profile
 - This will be implemented when the videos are available
- Change the name from ITW Assessment to Smart Stride: Toe-Walking Rehab



Refining Website

After

Smart Stride



About Smart Stride

The ITW Assessment Device is a groundbreaking innovation designed to transform the rehabilitation process for individuals with Idiopathic Toe Walking (ITW). By integrating cutting-edge motion capture technology, electromyography (EMG), and predictive algorithms, our device offers continuous monitoring of muscle activation and movement patterns.

This advanced system enables personalized and remote assessment of patient progress, addressing the limitations of

Smart Stride: Toe Walking Rehab

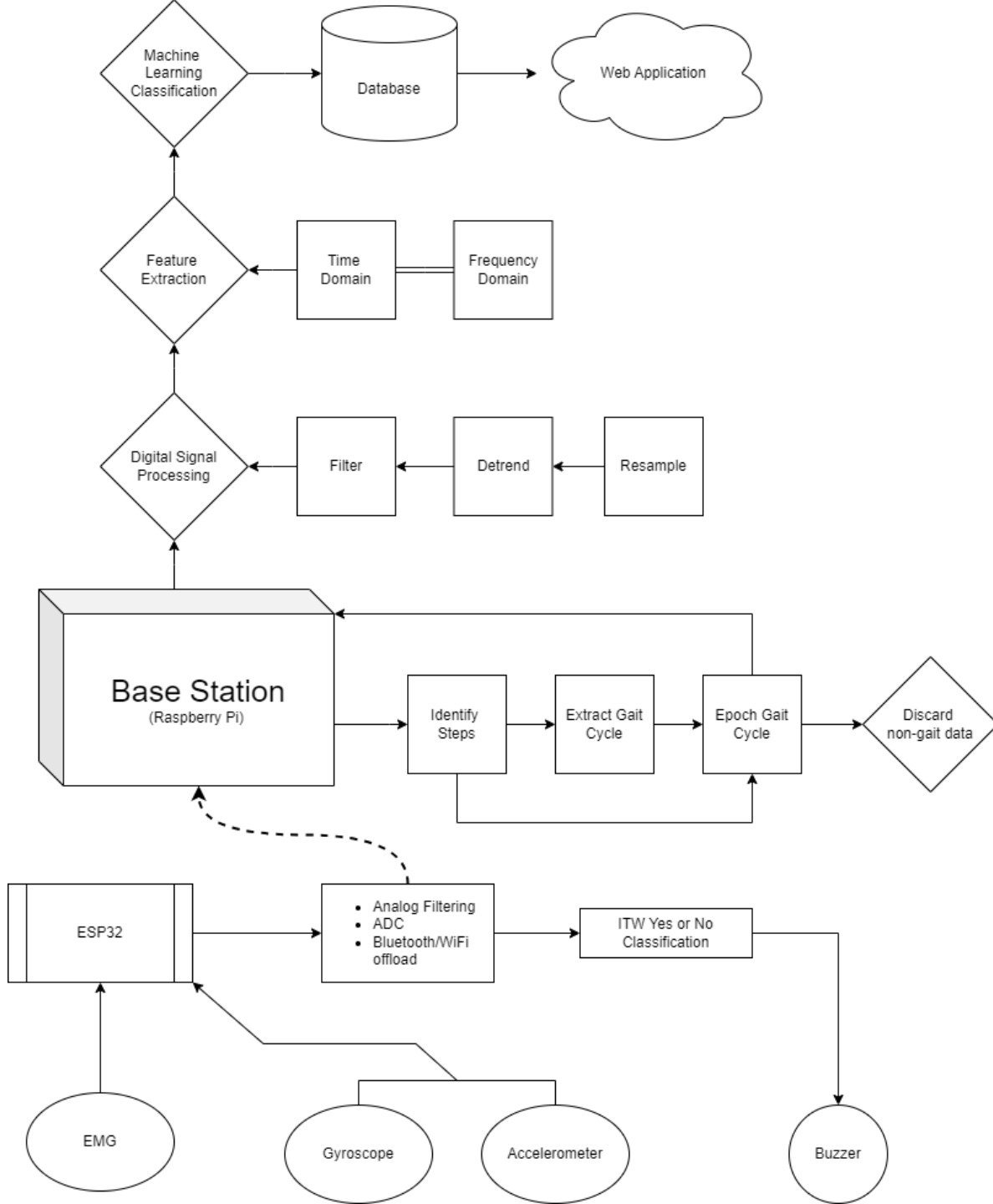
The ITW Assessment Device is a novel device made to revolutionize the rehabilitation process for individuals with Idiopathic Toe Walking (ITW), a condition characterized by abnormal gait patterns. The device continuously monitors muscle activation and movement by integrating motion capture technology, electromyography (EMG), and predictive algorithms, allowing for personalized and remote assessment of patient progress. The project's technical approach involves baseline data collection, sensor integration, data analysis using machine learning techniques, and developing a web application for clinician access. Through collaborative efforts and interdisciplinary expertise, the team aims to address the limitations of current rehabilitation methods and pave the way for more effective and accessible treatment options for ITW patients.



Patient Dashboard

Practitioner Dashboard

Before






Data Flow From Device

- Gather data through sensors
 - *Collected by ESP32*
- Filter the data
 - *Collected by Raspberry Pi*
- Identify gate cycle
- Send to database



Milestone 2

Task	Progress	To Do
Create Patient Login	95%	Fix credential validation error
Create Practitioner Login	95%	Connect login to page
Establish Security of Logins	90%	Test security of logins
Create separate Login pages	50%	Create practitioner login page
Create a forgot password/ help button	0%	Create login help button
New User Sign Up Functions	0%	Create lambda function to handle new user info
New User Sign Up Page	0%	Create and establish new user page





Milestone 3

Tasks

- Create real patient and practitioner profiles
- Add data to database
- Establish data filtering methods
- Real user testing

Possible Tasks

(depends on when the device can collect data)

- Test Bluetooth data collection
- Create graphs from collected data



Questions?

