Milestone 1

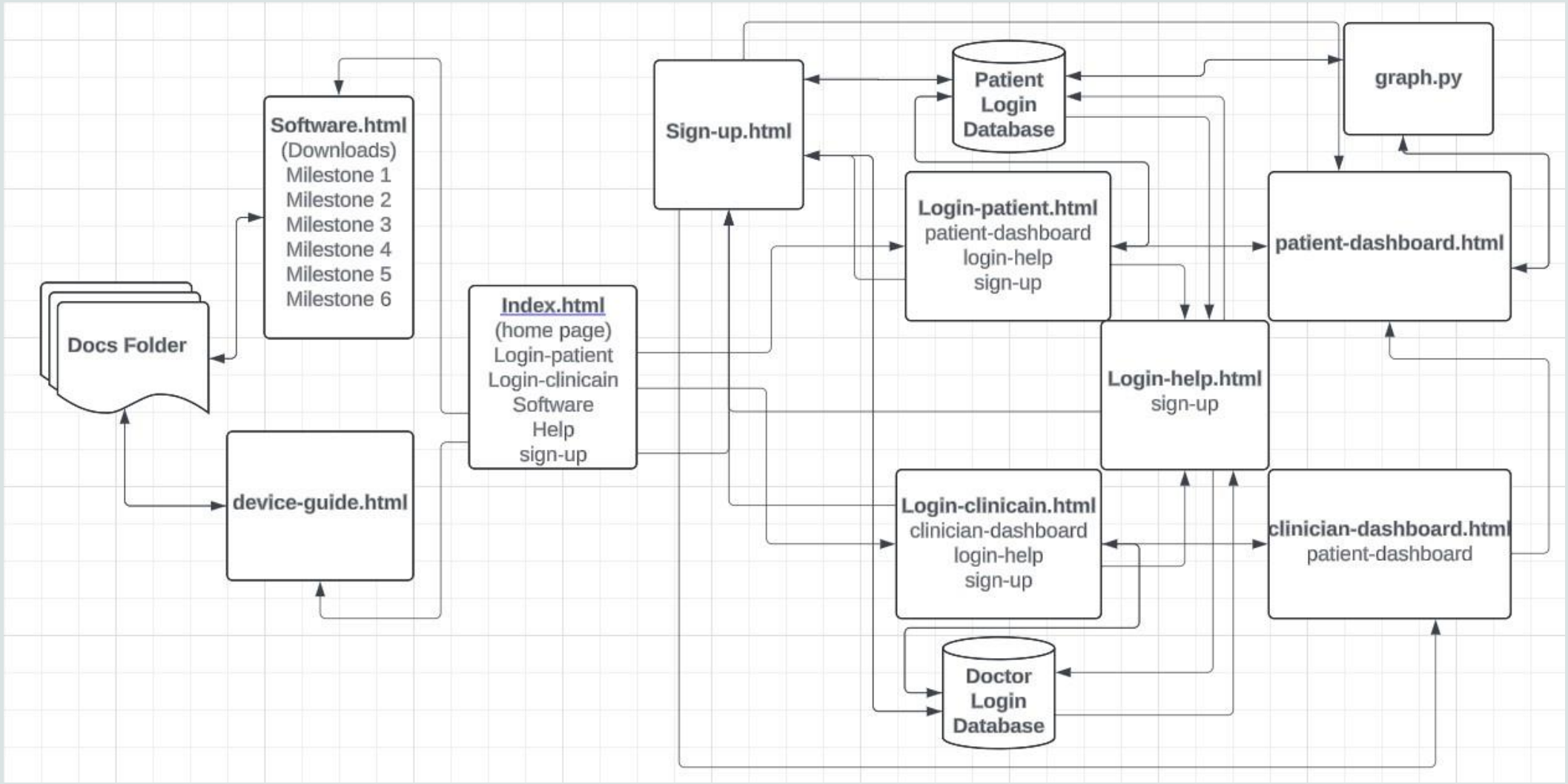
Smart Stride

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



Database

- Database requires Username and Password for both doctors and patients
- Patients have a CSV file doctors do not
- Patients hold the foreign key to their doctors
- Doctors hold the foreign key to multiple patients

username	password	first_name	last_name	doctor	security_question	security_question_answer	csv_file
cgrummer	12345	Cianna	Grummer	GreenEggs	What is your dogs name?	Lexi	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

username	password	first_name	last_name	security_question	security_question_answer	patients_list
GreenEggs	AndHam	Theodor	Suess	How many fish?	Two Fish	["cgrummer"]
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Team Feedback

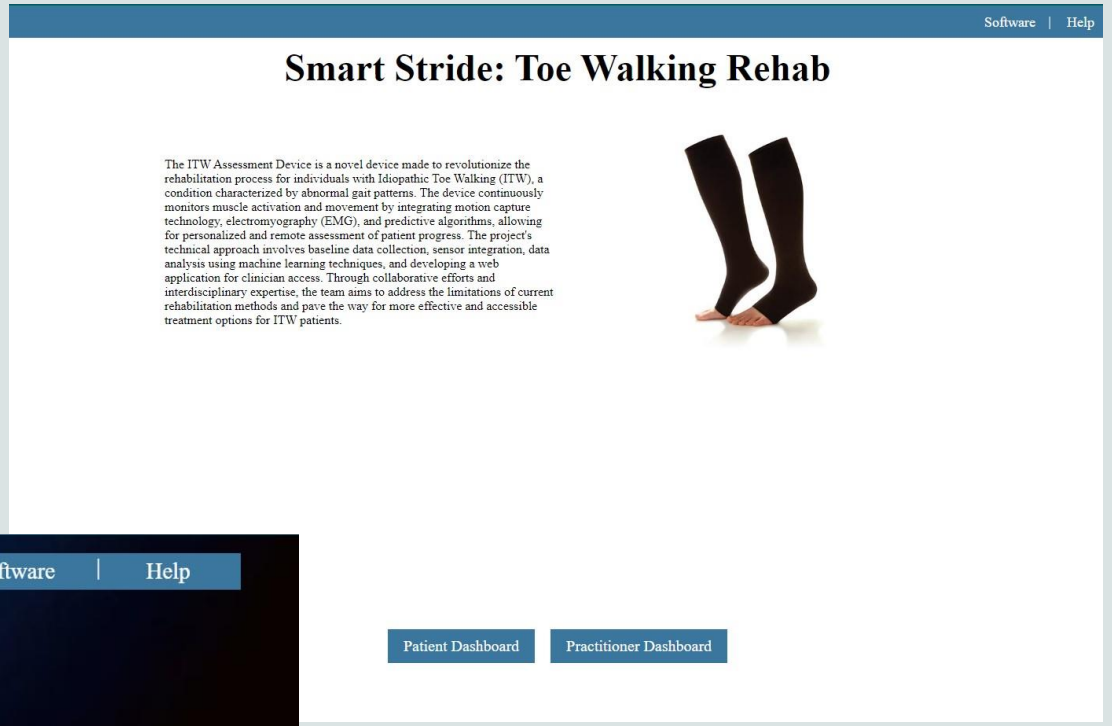
- Improve the visuals of the UI
- Add Section for a motion capture video to be displayed under a patient's profile
    - This will be implemented when the videos are available
- Change the name from ITW Assessment to Smart Stride: Toe-Walking Rehab

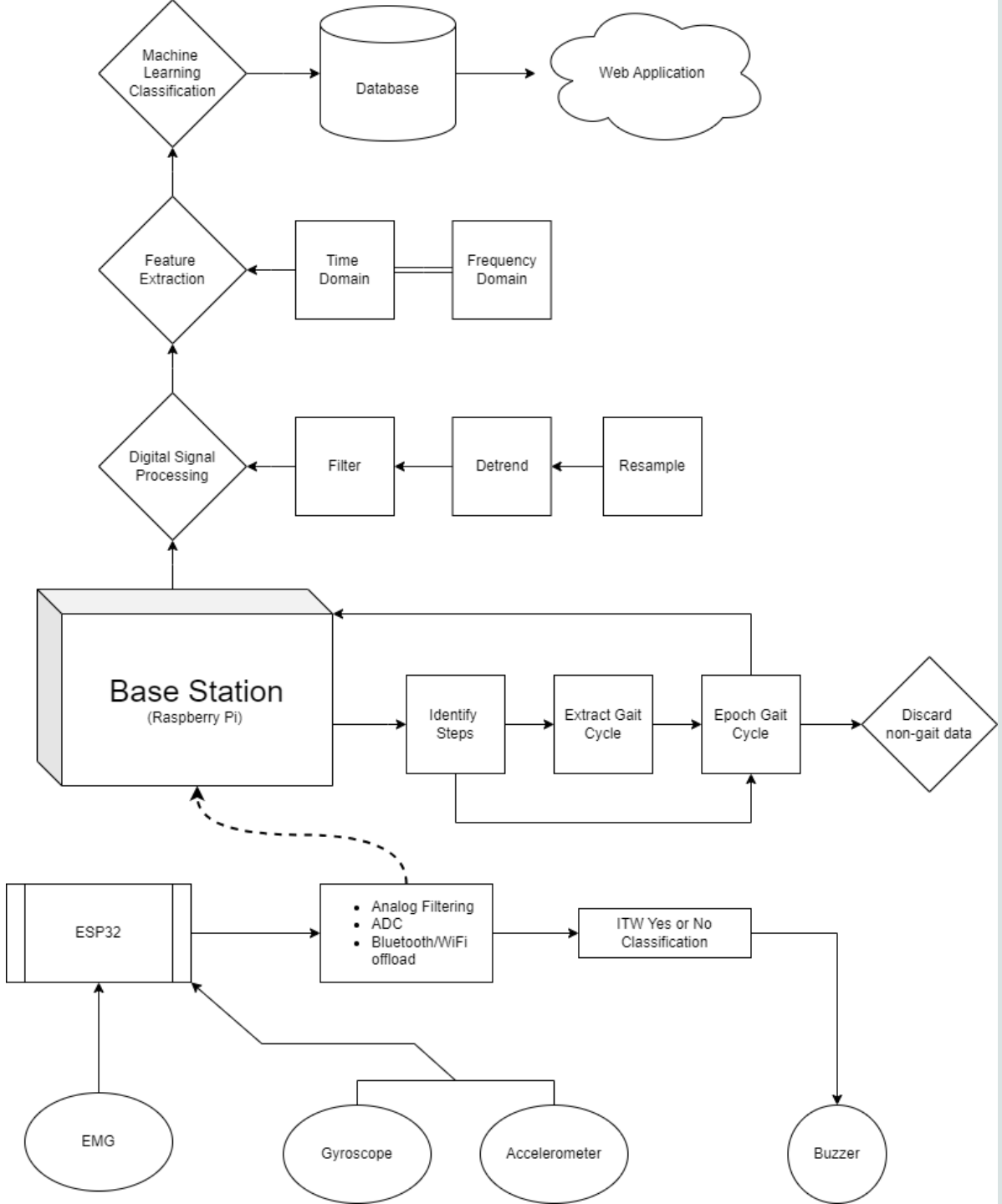
Refining Website

After

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.

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?