Milestone 5

By Cianna Grummer
SmartStride
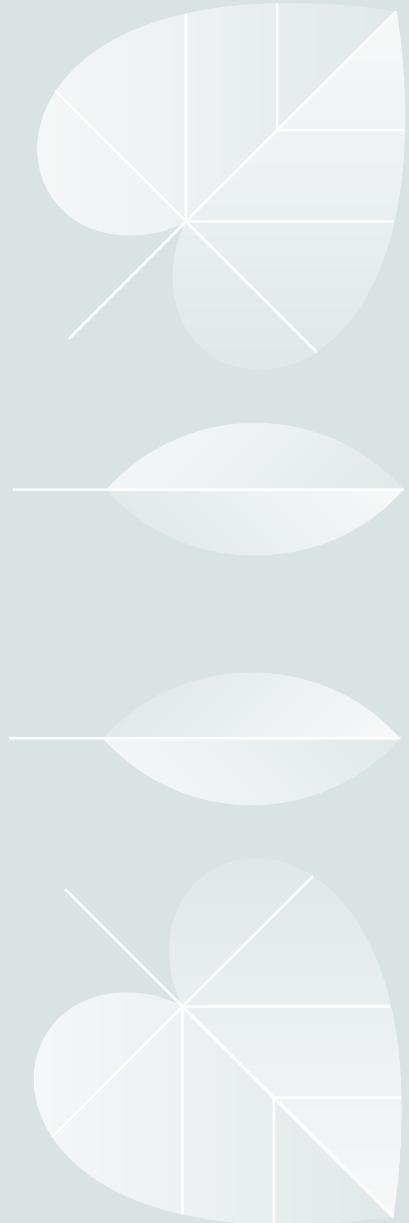
Milestone 5

| Task	Progress	To Do
Define sections	100%	N/A
Create pie chart	100%	N/A
New page for past results	100%	N/A
Create API and Lambda functionalities for pie charts	100%	N/A
Create API and Lambda functionalities for past results page	100%	N/A

Define Graphs
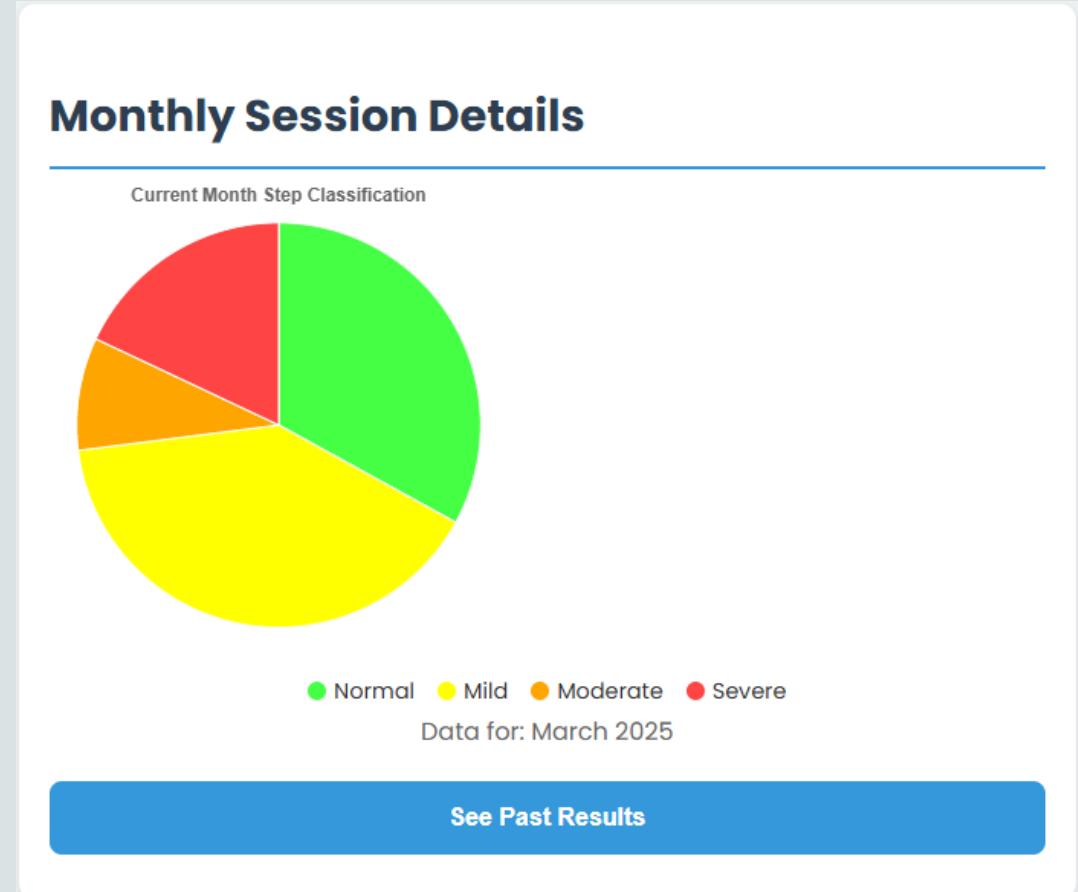
- Changes made:
  - *Renamed EMG Analysis to "Gastrocnemius EMG Activity"*
  - *Remove "Gait Analysis with step classification" section*
  - *Pie Chart will go under "Monthly Session Details"*
  - *Put average ITW foot angle under "Last PT Session Details" (doctor)*
  - *The time series plot showing averages over 1 gait cycle for ITW vs Normal Step (x = time, y = angle (degrees)) (doctor)*
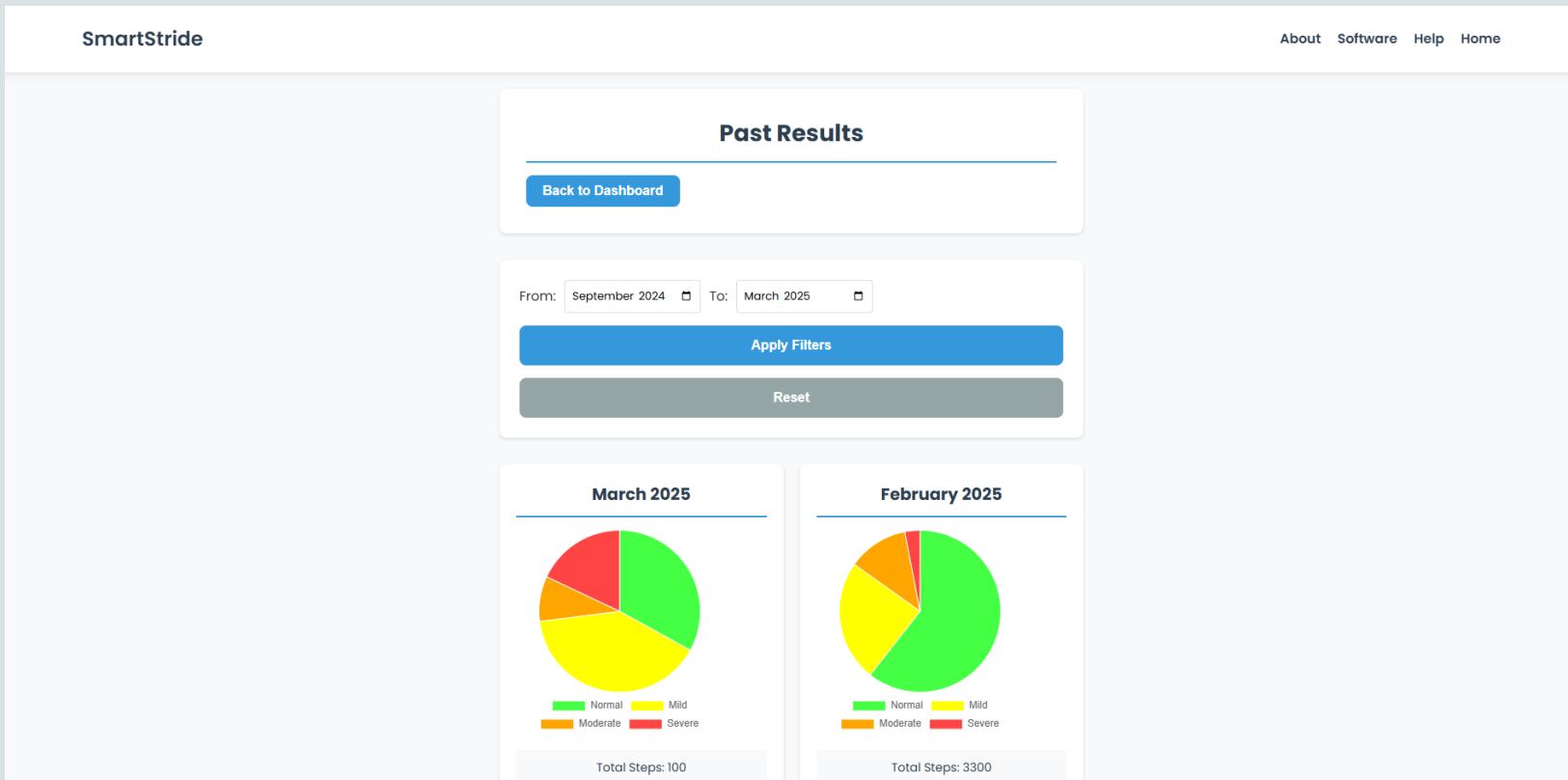
Pie Chart & Database

- Pie Chart is visible to patient and doctors

- Created new table in database

  - *Patient_pie_data*

- Created GetPieData Lambda & API

- Percentage of steps with classification

  - *Normal, Mild, Moderate, Severe*

Monthly Session Details

Current Month Step Classification

● Normal ● Mild ● Moderate ● Severe

Data for: March 2025

See Past Results

	id	patient_id	session_id	session_date	Normal	Mild	Moderate	Severe	Total
▶	32	cgrummer	1	2025-03-24 18:43:03	13	25	3	9	50
	33	cgrummer	2	2025-03-24 18:44:17	20	15	6	9	50
	35	cgrummer	3	2025-03-24 19:46:53	13	25	3	9	50
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
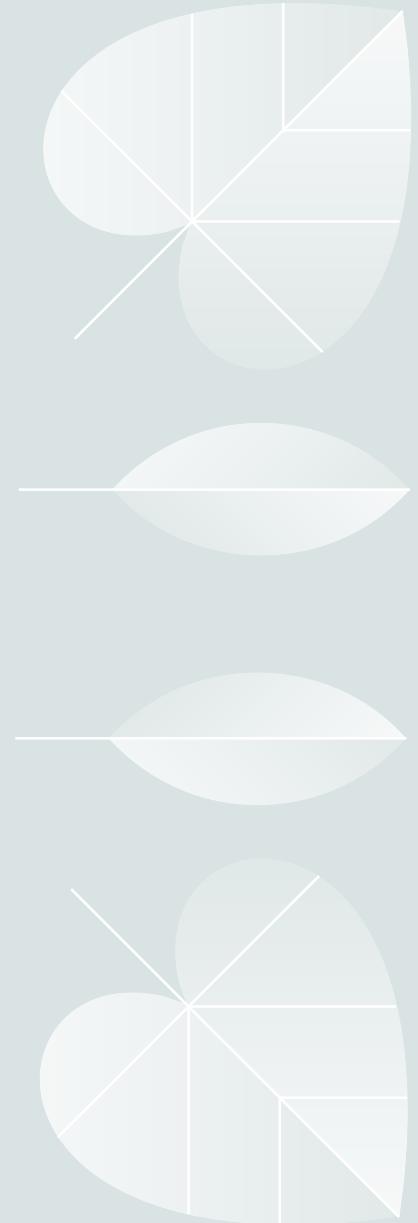
Past Results Page

- Accessible through "See Past Results" button under the main page pie chart

- Initially shows all patient results

- Can filter by month and year

- Uses the same API/Lambda as main page pie chart

Milestone 6
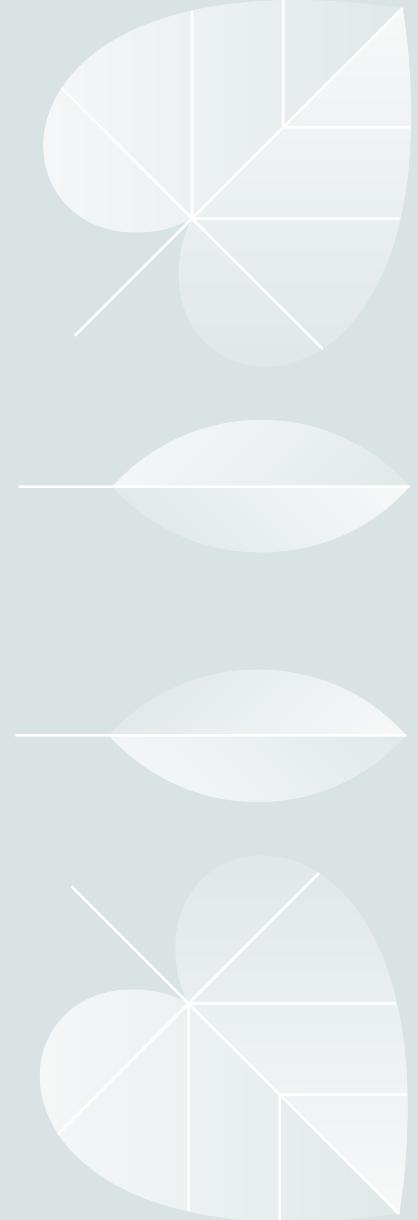
Task	Progress	To Do
User and/or Developer Manual	0%	Create user and/or dev manual
Demo Video	0%	Start creating a demo video
SmartStride Poster	10%	Complete my section in the SmartStride poster
Update User Guide	50%	Talk to SmartStride team to create a user guide for device
Update About Us Page & Home Page Description	30%	Work with SmartStride to create a more accurate description
System Testing & Evaluation	15%	Create a user survey, find testers, conduct login and data testing

User and Developer Manual
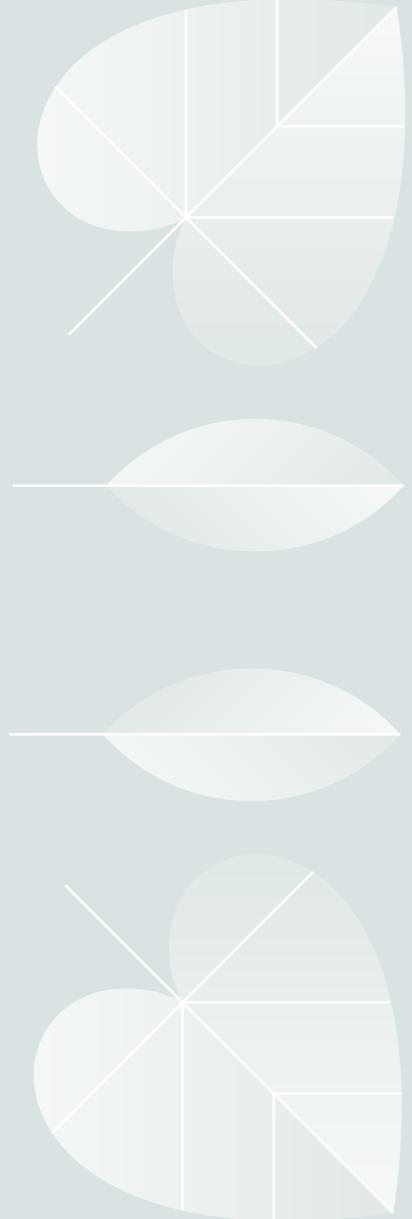
- User Manual

  - *Two user types patient and clinician*

  - *Shared sections: Sign-up, Log-in, Device Guide*

  - *Patient sections: Raspberry Pi app guide, manual upload, reading pie charts and severity bar*

  - *Clinician sections: Adding/dropping patients, viewing patient data, editing patient goals*

- Developer Manual:

  - *Diagrams and explanations of website structure, database structure, AWS tools (API, RDS, CloudWatch etc.)*

  - *How to guide for accessing the database using VCP security groups*

Demo Video
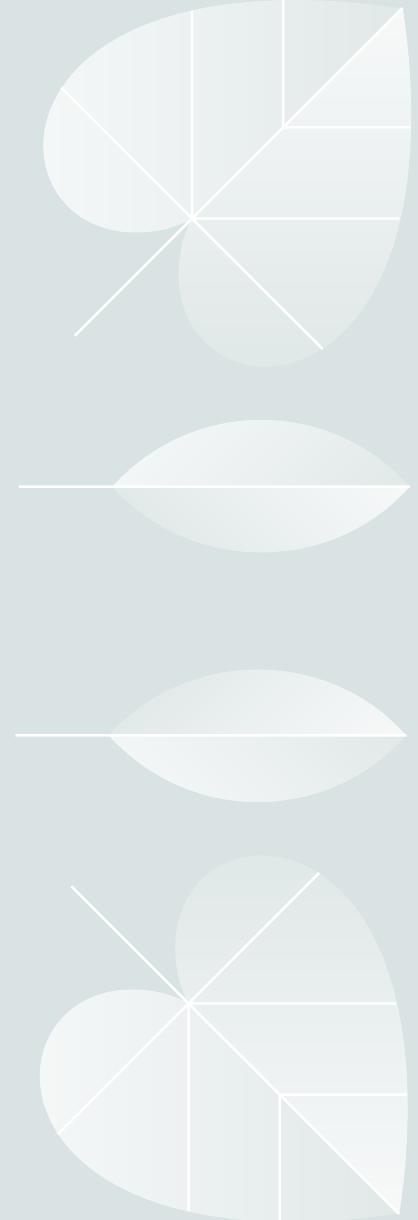
- Will show key website features:
  - *Sign-up and Log-in*
  - *Uploading data*
  - *Patient & clinician dashboards*
  - *Past results with filters*
  - *Raspberry Pi app*
  - *Real time updates when uploading data*

Updating User Guide, About Us, and Home Page Descriptions
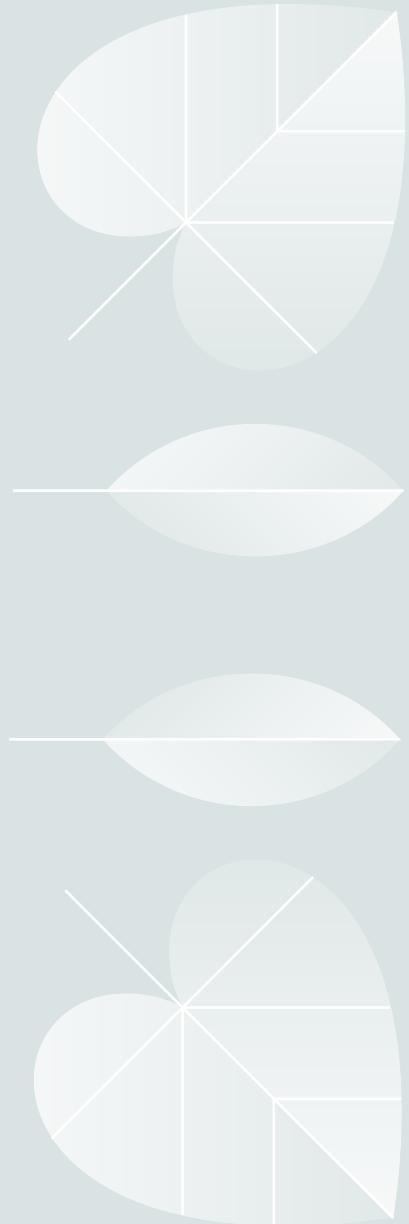
- User Guide Page:
  - *Currently has minimal information*
  - *Will include:*
    - SmartStride device instructions
    - Raspberry Pi app instructions
    - User manual for patients and clinicians
- About us page and home page
  - *Rewrite to better describe the SmartStride device and website*
    - What it is used for
    - Why it was made

System Testing & Evaluation

- Three evaluation categories:
  - *Usability*
    - User survey to be completed after completing number of tasks
      - *"How easy was it to find the sign-up page?" (1-5 stars)*
      - *One open ended feedback section*
  - *Reliability*
    - Test data upload and login success rates
      - *Data upload: 99% ideal, 95%-98% acceptable, <95% needs improvement*
      - *Login success rate: 99% ideal, 90%-98% acceptable, <90% unacceptable*
  - *Accuracy*
    - Compare data uploaded to original data
    - Get success rate from comparing number of uploads to number of uploads where data matches

Questions?