**Project Proposal: Clinical Tracking Dashboard**

In healthcare settings, especially rehabilitation and long-term care, clinicians often struggle to track patient progress over time. While the primary method of documenting visits is the electronic medical record (EMR) systems in hospitals, EMRs rarely offer visual or accessible representations of a patient’s progress through an episode of care. This makes it difficult, especially for newer clinicians, to assess treatment effectiveness and recognize areas for improvement during their workflow.

My project aims to address this problem by building a web-based tool that allows clinicians to visualize key patient data such as pain levels, goal achievement, and functional status over time. I believe these metrics will help improve clinical reasoning, self-reflection, and decision making. As a currently practicing physical therapist, this is a personal interest of mine and as I’ve experienced these struggles even to this day, this motivates me to create something useful to help myself, my colleagues, and future clinicians.

This project will be a web-based clinical tracking dashboard designed primarily as an info and data management tool for rehab clinicians. It will be designed to assist in monitoring key indicators such as pain levels, goal attainment, and functional status over the course of an episode of care. The website will include three main components:

1. Clinician Login/Selection
   1. This will be a page displaying a list of clinicians from the database with buttons to add or delete clinicians. The minimum viable version will allow direct selection of a clinician to access the patient list. An ideal version would include a login modal before proceeding.
2. Patient List
   1. This will be a page displaying a viewing list for patients associated with the clinician, with buttons to add or delete patients. Depending on the version, the add button will have varying amounts of patient information required to be entered. Selecting a patient will navigate to their detailed care profile.
3. Patient Care Profile:
   1. This page will include a profile picture, a section for patient’s general information, visual charts, and a notes section. At minimum, the visual chart will be a line graph tracking pain levels, but an ideal version would include additional charts for goal attainment and function rating. The visit notes will be located below the graphs. When selected, the visit note would show at least pain levels and a visit summary. Ideally, the note would open a modal with a visit summary, pain levels, and function ratings.

This project will serve as a valuable addition to my portfolio, demonstrating my ability to design and develop a full-stack application that addresses a real-world clinical challenge. It would highlight technical proficiency and understanding of gaps in the current healthcare system, along with initiative to design a creative solution. I am highly motivated to bring this project to life because it challenges me to grow as a developer and as a problem solver. I am anticipating dedicating 7-8 hours per week totaling approximately 40-45 hours over the remaining time in the course.

Following the guidelines outlined by Dr.Flinn, I will be using HTML/CSS/Javascript alongside the LAMP stack to develop this project. HTML/CSS will be used for the user interface, Javascript for front-end interactivity, PHP for backend logic, MySQL for the database, and Apache for the web server. With the remaining 5 weeks in this course, I will proceed with planning my project first including creation of an outline or mockup followed by developing the frontend, then the backend, and finally wrapping up the project in the final week. I plan to self-host the site during development. The following is a current outline for my tasks:

* Week 1: Planning and design
  + Define/outline the database schema for storing clinician, patient, and episode info
  + Create mockups for each major component: clinician selection, patient selection, episode profile
* Week 2: Frontend
  + Build HTML structure for each section followed by CSS styling
  + Begin outlining JavaScript and PHP scripts to support function
* Week 3: Backend
  + Develop PHP scripts for core functionality such as clinician creation and patient profile creation
  + Connect PHP with database and display data on frontend
* Week 4: Completing functionality
  + Finalize input forms and data validation
  + Complete integration of frontend and backend then test functionality
* Week 5: Finalizing
  + Refine visuals
  + Debug any remaining issues