AI Fitness Trainer

*Progress Report #9*

# TL; DR

**On track (*Github:***[*AI-FitnessTrainer*](https://github.com/aminuabdusalam/AI-FitnessTrainer)*)***.** Implemented **threading** to allow text to speech and trainer program run simultaneously **11/7.**

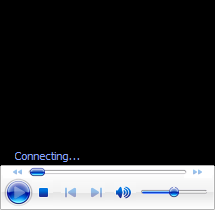
# Project Goals (Recap)

The goal of the project can be summarized as developing an **AI fitness trainer** embedded with **storage and recommender systems** and an **AI virtual mouse**.

The AI fitness trainer will help the user lose weight, gain muscle, and accomplish other fitness goals. In addition, it'd attempt to understand the client goals, develop a fitness routine, recommend a healthy eating plan, and ensure all exercises are performed correctly.

# Highlights

* **Implemented threading to allow simultaneous running of text-to-speech to call out the exercise count and the overall trainer program** [**(Fixed text\_to\_speech method**](https://github.com/aminuabdusalam/AI-FitnessTrainer/commit/81da283e2374399b6c09408d671f3e83fc91364e) **et** [**Addedthreading for trainer&t2s simultaneous run**](https://github.com/aminuabdusalam/AI-FitnessTrainer/commit/9f97b00168f9ce34381761daebff14d019ae6a2d)**)**
* **Completed overall testing of trainer program.**
* Utilized the program in a live exercise session conducted by me as shown below.

A picture containing text, person, indoor

Description automatically generated

* As shown below, trainer now works for all of **curls**, **pushups, and squats**:

A picture containing text, person, wall, indoor

Description automatically generated Graphical user interface, application

Description automatically generated



# Lowlights

None

# Next Steps

* Complete appropriate error handling by **11/14.**
* Create midpoint presentation draft by **11/14.**

# Timeline

This section lists the milestones of the project spread across two semesters (Fall 2022 and Spring 2023).

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestones** | | **ETA** | **Status** |
| **Requirements Gathering** (Project Idea, Project Proposal) | | 08/22 | Completed |
| **Design Exploration** (Setup and Installation of necessary technologies, Addition of Project to remote repo, Skill Preparation, Framework Project) | | 08/29 | Completed |
| **Implementation** | Complete Pose Estimation Build | 09/19 | Completed |
| Complete AI Personal Trainer for **Curls** | 10/11 | Completed |
| Complete AI Personal Trainer for **Pushups** | 10/18 | Completed |
| Complete AI Personal Trainer for **Squats** | 10/25 | Completed |
| Complete speech-to-text et text-to-speech | 10/31 | Completed |
| **Quality Testing** | | 11/7 | **Completed** |
| **Midpoint Presentation Draft** | | 11/14 |  |
| **Midpoint Demo & Report** | | 11/21 |  |
|  | **WINTER BREAK** | | |
| **Project Review** (Current status and Re-evaluation of Next Steps as Needed) | | 01/16 |  |
| **Implementation** | Complete Storage System Build | 01/30 |  |
| Complete Recommender System Build | 02/20 |  |
| Complete Frontend/Website (Stretch Goals) | 03/13 |  |
| Complete Hand Tracking Build (Stretch Goals) | 03/13 |  |
| Complete AI Virtual Mouse Build (Stretch Goals) | 03/27 |  |
| **Quality Testing** | | 04/3 |  |
| **Final Presentation Draft** | | 04/10 |  |
| Final Demo & Report | | 04/17 |  |