

Motivation

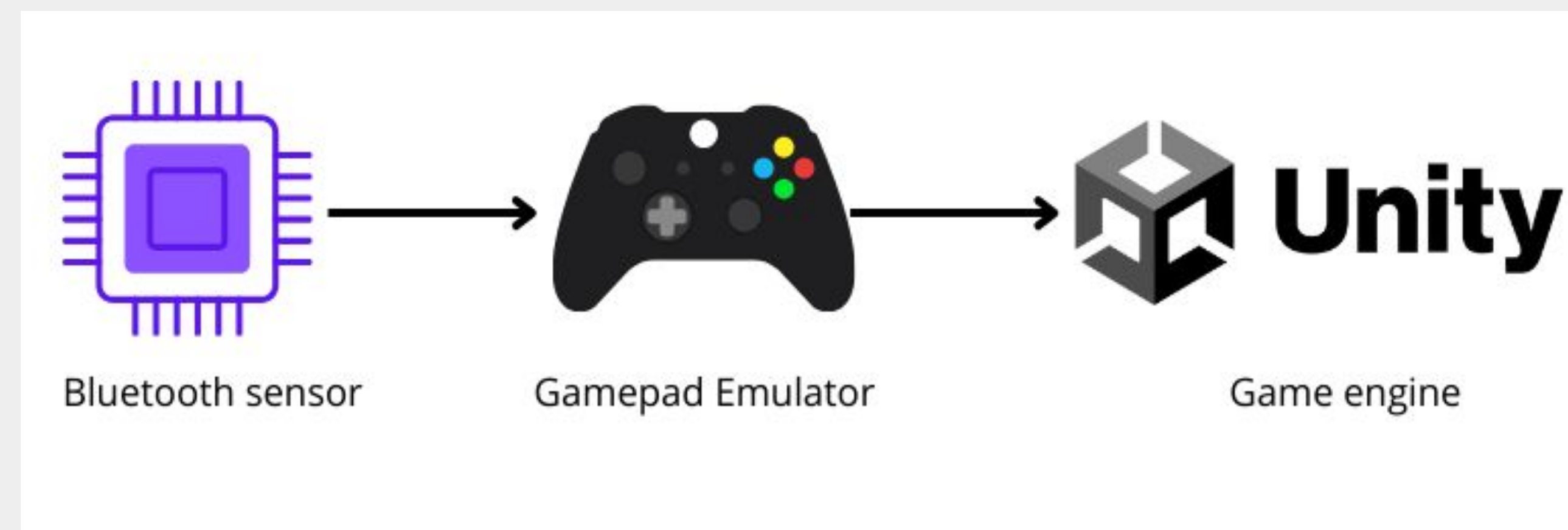
- Millions in the U.S. face mobility challenges, showing a need for better, more accessible rehab tools.
- Traditional therapies often lack motivation; our project introduces a game to make therapy more effective.



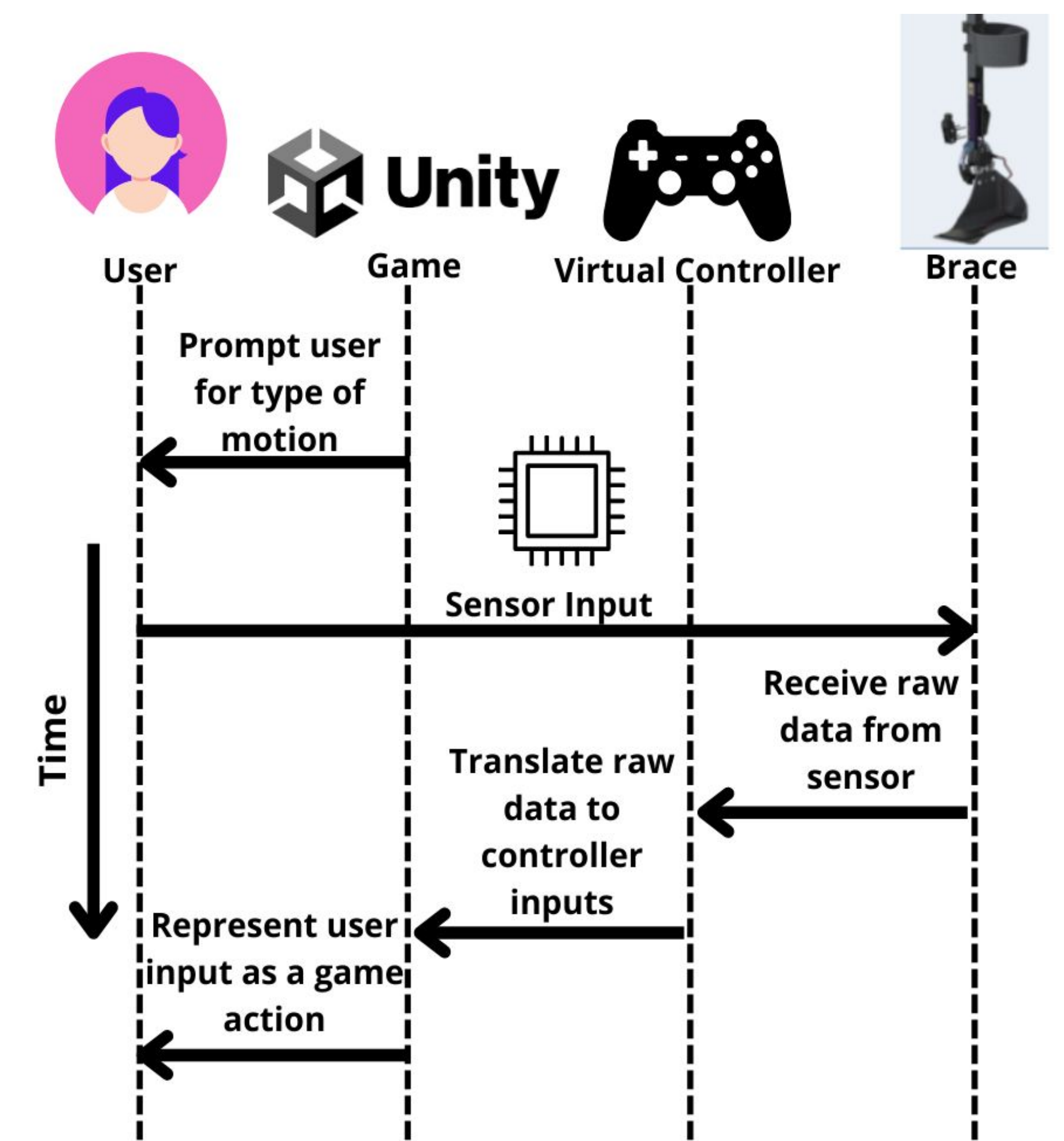
Hip and ankle brace that will be integrated into our game

Overview

- We are aiming to create a game that uses real-time data from sensors to provide interactive feedback, making therapy with the exoskeleton more motivating.
- We have started by using a python library (Vgamepad) that serves as a middleware for testing Unity games.



Architecture



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Goals

- **Open Source Access:** Ensure the game remains open source to support accessible rehabilitation tools for everyone.
- **Adaptable Design:** Create the game primarily for leg braces, with options to easily configure it for other rehab devices.
- **Enhanced Engagement:** Develop a game that keeps users motivated and engaged throughout their exercises.

Key Features

- **Gamepad Emulation:** Integrates with Unity and other game engines, allowing flexibility across platforms.
- **Guided Biofeedback:** Offers visual and audio cues to help users perform exercises correctly. There will be milestones set that trigger a success screen for the user.
- **Flexible Setup:** Easily configurable for different rehab devices, not just leg braces.

Technologies

