EEE521 FINAL YEAR PROJECT: PROJECT STATEMENT

Student Name:	Mark Ruddy		B00782192
Course Title:	BSc Hons Computer Science		
Project Title:	NeuroRecovery App: An App for Post-Stroke Movement Restoration		
Project Supervisor:	Professor Girijesh Prasad	Second Marker:	Mr Malachy McElholm

Project Aims and Objectives

The overall objective of this project is to develop an Android app which will assist stroke sufferers in completing the appropriate therapeutic exercises post-stroke. The consistent completion of these exercises will increase neuroplasticity required for motor learning in a post-stroke patient.

The app should provide the main following features:
- Scheduling of exercises and issuing reminders with notifications
- Displaying timings so as to perform repetitive exercises in a specified order and at desired frequency
- Demonstrating the movement tasks through video
- Recording of patient information, details of therapeutic tasks and periodic recover outcomes
- Providing neurofeedback in terms of changes in motor impairment

Problem Statement (Max 100 words)

Over twenty million people suffer from stroke annually. In the UK there are 1.3 million stroke survivors, with thirty-nine thousand stroke survivors in Northern Ireland alone [1].

For stroke survivors who suffer motor impairment, theurapeutic motor exercises are important for recovery. These exercises may be carried out with assistance from a professional physiotherapist. However, access to physiotherapists is expensive and limited.

The NeuroRecovery app aims to provide a supplement in this area of therapeutic exercises. By organising the exercises with timers and notifications, it can reliably ensure that the stroke survivor is incentivised and reminded to complete the exercises.

References
1. Stroke Association: Stroke Statistics [https://www.stroke.org.uk/what-is-stroke/stroke-statistics]

Are there any risk factors/health and safety issues? Yes ☐ No ☑

Has the projects been entered into the Ethics database? Yes ☑ No ☐

Computing Projects:
Please confirm ☑ that the proposal satisfies the BCS requirements for (2.5.1) “General project requirements” and (2.5.2) “Undergraduate individual project requirements”.

Engineering Projects:
Please confirm ☐ that the Health and Safety Risk Assessment for Undergraduate projects is complete.

Student Signature: Mark Ruddy	**Date:**	**2022-09-28**