ACS6200: Individual Project – Aim and Objectives

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| Student name: yuqi He  Student Reg No: 200200170  Project code and Title: Control the wheelchair based on the motion image and BCI technology  Supervisor:Dr. Mahnaz Arvaneh  Second Reader: |

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| Project Aim:  This design helps those who suffer from diseases or lose the ability to walk due to accidents to sit in a wheelchair, operate the wheelchair through consciousness, and move to the position they want. The wheelchair is controlled by collecting the user's imagination that the fingers of his left and right hands point to different directions or different postures of the arms. |

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| **Project Objectives, to be described as:**  Basic Objectives:   1. Collect highly informative imagine motion data and makes classification algorithms through the data collected. 2. Use EEGlab toolbox to process EEG signal data in Matlab. 3. Use the CSP algorithm to extract discriminative features from two different conditioned brain signals—generally. 4. Simple classification of training data using FLDA or SVM. 5. Import the processed data into the model to check whether it can be achieved.   Advanced Objectives:  *(these should be appropriate to cover advanced topics/content, to enable the creation of work/results beyond the pass threshold, as well as give the student the opportunity to demonstrate in-depth understanding and analysis towards discriminating ‘first class’ performance 70%+)*   1. Can be implemented in an environment with partial interference. 2. Reduce as much as possible the response time between human-computer interaction during use. |

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| My project requires components/items to be purchased and I confirm that I have completed the budget request form on MOLE (please answer yes/no in the box on the right) | yes |
| Will (or do you anticipate) that any part of your project will require **ethics** approval? – (please check with your supervisor and answer yes/no in the box on the right) | no |
| Will (or do you anticipate) that any part of your project will be **confidential**? – (please check with your supervisor and answer yes/no in the box on the right) | no |
| **Please attach (as an additional sheet) your project work plan in the form of Gantt chart**  **图表  描述已自动生成** | |
| Student name (Print): ………………………………………………………………………. Date: ………………………………………… | |