School of Computing 

COMP5200M Project Specification

***NOTE to student****: ensure you have discussed the content with the supervisor. Submit an* ***electronic version*** *of this form in pdf via the COMP5200M module page on Minerva; with filename of the format <surname><year>-Spec ( e.g. SMITH17-Spec.pdf).*

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| **Student Name:** Fanhui Meng |
| **Programme of Study:** Artificial Intelligence |
| **Supervisor Name:** Amy Lowe |
| **Name of External Company** (if any)**:** N/A |
| **Type of Project:** Exploratory Software |
| **Provisional Title of Project:** Control Systems (AI) for Wrestling Robots |
| **Aim of Project:**  Develop a control system for Zumo robot, which is based on C++.  Entered and present robot in the School of Computing Zumo wrestling league. |

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| **Objectives:**  Develop a well-performed robot to push the other robot out of the wrestling ring.  To achieve this may require several aspects:   1. Use the phototransistor and infrared emitter that face downward to distinguish between black and white surfaces. This can ensure that the robot won’t run out of the ring by itself. 2. Compare the two reading from proximity sensors to detect opponent in different direction. 3. Use PWM control the speed of left & right motor. 4. Write program for strategy to deal with different situations. (e.g. drive the robot moving full speed ahead when see opponent ahead) And push opponent out of the ring. |
| **Deliverables:**  Program for Zumo wrestling robot, and attend Zumo robot wrestling league. Present fighting robot during the student showcase. |