EGH446 Autonomous Systems

**Major Project – Individual Report.**

Instructions: replace the yellow highlighted text with your own words (that is, delete the yellow text). You must use this template (not alternative template).

Individual details

|  |  |
| --- | --- |
| Author | Your name |
| Sub-systems | Summarize work done. |
| Project Partner | Insert your group member name here |

System description (group’s own words, allowed to be same as your group partner)

|  |  |
| --- | --- |
| Overview of your system | In your group’s own words, describe what and how the submitted version of the system does. How it works. Its key feature (which techniques where used).  The guidance system was broken into several modules or subsystems, such that they would integrate to perform the task of moving between a set list of waypoints in some arbitrary space. The subsystems designed in this project were as follows:   * Heading Control Subsystem * Velocity Control Subsystem * Receding Virtual Waypoint (RVWP) Logic Subsystem. * Diagnostic System   These were connected as can be seen in Figure X.  Discuss how the sub-systems interacted. Which was the weaker sub-system?  Minimum 700 words |
| Performance | What was your total time? |
| Interfaces | In your group’s own words, describe how the team manages the interfaces between the sub-system. Did they remain constant during the project, or change?  Minimum 100 words |
| Limitations | In your group’s own words, describe failure cases, or cases, that your implementation of the system was worse than expected.  Minimum 500 words |
| Figure of the route defined by the waypoints and vehicles path. | Include a figure of the vehicle’s trajectory and waypoints. |
| Report on cross track error | Minimum 200 words |

Sub-system(s) description (individual student’s own words)

|  |  |
| --- | --- |
| Overview of function | In the individual student’s own words, describe what and how the submitted version of the sub system does.  Minimum 500 words |
| Performance analysis | In the individual student’s own words, describe testing and performance analysis on your sub-system (as distinct from whole of system performance).  Minimum 300 words |
| Pros | In the individual student’s own words, describe positive attributes compares to other solutions approaches you considered.  Minimum 500 words |
| Cons | In the individual student’s own words, describe negative attributes compares to other solutions approaches you considered.  Minimum 500 words |
| Limitations | In the individual student’s own words, describe failure cases, or cases that your implementation of the sub-system was worse than expected.  Minimum 300 words |

Description of all code or Simulink blocks developed by student. (individual student’s own words)

|  |  |
| --- | --- |
| Function/module name | Purpose:  In the individual student’s own words, describe matlab function of Simulink model/block. What is does and how. Reference/links to technique.  Less that 100 words  Inputs:  Describe input signals/data. Dot points.  Outputs:  Describe input signals/data. Dot points.  Functions this function/module calls.  List functions/modules this module calls. Dot points.  Functions this function/module called by.  List functions/modules this module is called by. Dot points |
| Repeat for all code modules/blocks written |  |