# SDP MILESTONE 3 REPORT

For this milestone I shifted my focus away from the vision system to the strategy system. Most of my time in strategy was spent fixing small bugs, trying to learn how the system worked so that I could work independently. In this respect I feel I was rather successful as I can now pinpoint pieces of code immediately and generally fix any errors that come up without having to bother others.

On the vision system, before any switching took place, I implemented what I feel was a rather critical piece of code. I created the method which we now use for orientation. After spending the few weeks prior trying to get a good algorithm for this, the solution was to go back to basics and not to overcomplicate things. The method is rather effective going by eye. I unfortunately have no metrics to confirm this as other systems were more critical than testing the vision system.

From here on I began to move towards the strategy system. It was a move as I did it gradually, working on integrating the different sub systems at first, before fully working on strategy. After a few weeks of adding code the system was becoming bloated with redundant code. I spent a day or two simply running through the project refactoring it to be as simple as possible while maintaining the functionality it had previously. While running through the code I tried to grasp how it worked, and fixed any bugs I happened to come across. This turned out to be many.

After completion of the refactoring the first thing I did was to offer my self as a coder for others. I could then implement the functions they desired with my minimal knowledge of the system. In doing this my knowledge gradually grew and after a day or two I was able to work independently. The first thing I did independently was to create an overlay for the vision feed showing the plan that the planning system had generated. This consisted of generating an image representation of our A* map and adding it to the feed window.

The knowledge I gained from the above task helped me greatly and I was now a resource for others. I spent a lot of time with Chris working on planning and fixing bugs that we tracked down. This also taught me about the control interface with the robot. By this point I had a fairly good knowledge of all systems within the project except for the simulator. I furthered this knowledge by working with David on the control interface for the remainder of the time (with the occasional fix for other systems).

While the work here seems fairly limited I spent a lot of time working on bugs. Something which is of course critical to the project.