Moway - Virtual self driving car using reinforcement learning

Feb 8, 2019

https://github.com/sajeevan16/Moway

CS3202 - Software Engineering Project

Project manager V. Sajeevan

Project dates Jan 15, 2019 - May 4, 2019

Completion22%Tasks53Resources1

The project is about designing and developing a virtual self-driving car using reinforcement learning to mimic the behaviour when it is running with set of another self-driving cars or human cars. This can be used to observe the impact that the self-driving car can have on damping the traffic bottlenecks caused by manned vehicles. This framework can be simulatable in different traffic situation and different phenomena.

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Tasks

| Name | Begin date | End date | Durati on |
|------------------------------------|------------|----------|--------------|
| Moway - Virtual self driving car | 1/15/19 | 5/3/19 | 109 |
| Inception | 1/15/19 | 2/6/19 | 23 |
| Project Proposal | 1/15/19 | 1/24/19 | 10 |
| Understand the Project | 1/15/19 | 1/15/19 | 1 |
| Study existing projects | 1/16/19 | 1/18/19 | 3 |
| Identify requirements | 1/18/19 | 1/20/19 | 3 |
| Prepare project proposal document | 1/20/19 | 1/23/19 | 4 |
| Finalise project proposal document | 1/24/19 | 1/24/19 | 1 |
| Project planning | 1/25/19 | 2/6/19 | 13 |
| Feasibility study | 1/25/19 | 1/28/19 | 4 |
| Prepare feasibility report | 1/29/19 | 1/31/19 | 3 |
| Finalise feasibility report | 2/1/19 | 2/1/19 | 1 |
| Project planning and scheduling | 2/2/19 | 2/4/19 | 3 |
| Prepare project schedule | 2/4/19 | 2/6/19 | 3 |
| Elaboration | 2/7/19 | 2/25/19 | 19 |
| Requirements | 2/7/19 | 2/16/19 | 10 |
| Find and analyse requirements | 2/7/19 | 2/8/19 | 2 |
| Requirement specification | 2/9/19 | 2/10/19 | 2 |
| Requirement validation | 2/11/19 | 2/12/19 | 2 |
| Prepare SRS Document | 2/11/19 | 2/14/19 | 4 |
| Finalise SRS document | 2/15/19 | 2/16/19 | 2 |
| Design | 2/13/19 | 2/23/19 | 11 |
| Prepare abstract design | 2/15/19 | 2/16/19 | 2 |
| Architectural Design | 2/17/19 | 2/18/19 | 2 |
| Component Design | 2/19/19 | 2/20/19 | 2 |
| Prepare SDS Document | 2/13/19 | 2/22/19 | 10 |
| User interface Design | 2/21/19 | 2/23/19 | 3 |
| Finalise SDS Document | 2/22/19 | 2/23/19 | 2 |

Tasks

| Name | Begin date | End date | Durati on |
|---|------------|----------|--------------|
| Prepare project progress report I | 2/24/19 | 2/25/19 | 2 |
| Construction | 2/24/19 | 4/1/19 | 37 |
| Iteration I | 2/24/19 | 3/6/19 | 11 |
| QA Plan and Testing plan | 2/24/19 | 2/25/19 | 2 |
| Implement user management system | 2/26/19 | 2/28/19 | 3 |
| Unit Testing | 3/1/19 | 3/2/19 | 2 |
| Prepare demonstration for Mid | 2/28/19 | 3/6/19 | 7 |
| Iteration II | 3/3/19 | 3/19/19 | 17 |
| Implement flat Car and Environment | 3/3/19 | 3/4/19 | 2 |
| Implement Autonomous Car using Reinforcement Learning | 3/5/19 | 3/6/19 | 2 |
| Implement Connectivity of Autonomous Car With Environment | 3/7/19 | 3/8/19 | 2 |
| Improve code quality | 3/9/19 | 3/12/19 | 4 |
| Improve User Interface | 3/13/19 | 3/16/19 | 4 |
| System integration | 3/17/19 | 3/19/19 | 3 |
| Prepare progress report II | 3/19/19 | 3/21/19 | 3 |
| Testing | 3/22/19 | 4/1/19 | 11 |
| Unit testing | 3/22/19 | 3/24/19 | 3 |
| System integration testing | 3/25/19 | 3/28/19 | 4 |
| Prepare testing report | 3/28/19 | 4/1/19 | 5 |
| Transition | 4/2/19 | 5/3/19 | 32 |
| System validation and Beta testing | 4/2/19 | 4/4/19 | 3 |
| System Deployment | 4/5/19 | 4/7/19 | 3 |
| Prepare Final Demonstration | 4/8/19 | 4/12/19 | 5 |
| Prepare final report | 4/13/19 | 4/26/19 | 14 |
| Prepare project paper | 4/27/19 | 5/3/19 | 7 |

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Gantt Chart

