**Project Status Report**

**Northrop Grumman – Quantum AI AT The Edge**

**As Of: 02/06/2022**

**Project Status Summary**  Percent Complete: 20%

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scope | Schedule | Cost | Risks | Quality |

Risks

The sponsor has communicated that this project is fully R&D and exploratory by nature. There is a high probability that the project will not actually work. However, we will certainly be doing our best. If the quantum piece fails to show improvements over traditional models, then traditional models will be used for inference on the emulator.

# Work Planned for Last Week

We started digging into our data as well as continuing our solution design. Now that we have two teams, one for each model, we will begin working on a high-level solution design for both the classical ML model and the Quantum ML model. We also worked out a solution for running the models (once trained) on the Vitis Emulator.

# Work Completed Last Week

We now have two teams, and each team is becoming more familiar with their data as we decide which dataset to use in our model training. We continue to work on the high-level solution design as well. We also came up with a solution to run our models for inference on the Vitis emulator. Since the board simulators are only available on Linux we will be training the models, and once the models are trained moving them to the Linux laptop to run on the emulator.

# Work Planned For Next Week

Each team will continue to work together to familiarize themselves with their respective development environments now that everyone has their machines setup and we have a solution for running models on the emulator. We are also going to continue working on our high level solution design.

# Open Issues

* They are currently no open issues.

# Deliverables and Milestones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Milestone | WBS | Planned | Forecasted | Actual | Status |
| Initial development environments | 002 | 10/11/2021 | 10/11/2021 | 10/12/2021 | Complete |
| Supplemental development environments | 004 | 10/30/2021 | 10/30/2021 | 10/31/2021 | Complete |
| Setup Vitas | 006 | 10/21/2021 | 1/15/2021 | 1/14/2021 | Complete |
| UML Solution Design | 008 | 01/31/2022 | 02/18/2022 | TBD | Incomplete |
| Deliverable | WBS | Planned | Forecasted | Actual | Status |
| Setup git branches | 003 | 10/3/2021 | 10/3/2021 | 10/3/2021 | Complete |
| Project Charter Updates | 001 | 10/14/2021 | 10/15/2021 | 10/14/2021 | Complete |
| Requirements Document | 005 | 10/21/2021 | 11/08/2021 | 11/15/2021 | Complete |
| First Use Case | 007 | 10/21/2021 | 10/24/2021 | 10/24/2021 | Complete |

# Open Change Requests

|  |  |  |  |
| --- | --- | --- | --- |
| Change Request Name | Change Request Number | Request Date | Current Status |
| NA |  |  |  |
| NA |  |  |  |

# Key Performance Indicators (KPI's)

**Schedule** - Project is on schedule

Schedule Variance (SV): +/- 2 days

**Cost** - Project is on budget

Cost Variance (CV): $0