

# PROJECT STATUS REPORT

## NORTHROP GRUMMAN – QUANTUM AI AT THE EDGE

### AS OF: 04/17/2022

#### PROJECT STATUS SUMMARY

Percent Complete: 85%

Scope	Schedule	Cost	Risks	Quality
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#### 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 planned to start refactoring the code so that our quantum models can run on IBM's physical quantum processors. We also planned to finish our analysis of the classical models. We continued to debug the quantum MLP and the errors we planned to resolve are now resolved but now we have new bugs to work on.

#### WORK COMPLETED LAST WEEK

We completed our poster along with a serious cleanup and reorganization of the repository. We also wrote up an aesthetic and concise README for the repository landing page. We managed to debug several issues with our quantum MLP, only to create some newer issues but progress is still moving forward. After several revisions of our poster, we sent it off to inkspot on campus for printing. We also planned out our shifts during the engineering expo to present our poster.

#### WORK PLANNED FOR NEXT WEEK

The team plans to continue debugging the quantum MLP to reach our stretch goal of taking the MLP and SVM and running it on a physical quantum processor. We are all also getting ready to present our findings at the engineering expo on April 22<sup>nd</sup>. Additionally, we have also been invited to the Northrop Grumman campus on April 28<sup>th</sup> to present our findings there as well.

**OPEN ISSUES**

- There are currently no longer any 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
Solution Design	008	01/31/2022	02/18/2022	2/24/2022	Complete
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