**“Arti-GaN”**

FA21 CSCI-P445 Capstone RF 5

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9 November 2021

**Open Source Software Selection**

**Tensorflow**

1. The Apache License 2.0 allows us to use the software however we would like.
2. The community is very strong. Tensorflow is very well-known and often the go-to for creating machine learning projects.
3. Tensorflow is well-known and widely used.
4. For our project, this will not be an issue.
5. They have review processes in place to make sure only good changes are made to the project.
6. The documentation is very good. It can be found here: <https://www.tensorflow.org/api_docs/python/tf/all_symbols>
7. Tensorflow was created to make the complicated process of making neural networks easy. For the backend of our project, we are just making a neural network so Tensorflow should work very well for us.
8. The RFC process allows the community to submit ideas for the project that can then be reviewed by stakeholders and experts. This allows the community to have input as to what should be added/changed in the project.
9. Yes.
10. Yes. Users can submit security issues to the GitHub page.

**NumPy**

1. The BSD 3-Clause license lets us use the software however we would like.
2. Numpy is well-known and has a very strong community.
3. Numpy is very popular and well tested.
4. This won’t be an issue
5. All pull requests must be reviewed before being accepted.
6. Numpy has good documentation. It can be found here: <https://docs.scipy.org/doc/>
7. NumPy will be the main tool we use to handle our datasets. We will be using NumPy the way it was made to be used so we won’t need to adjust it for our needs.
8. We could contribute in a lot of different ways, including writing code and reviewing pull requests.
9. Yes, it will be able to handle our needs for this project.
10. Yes, you can submit security vulnerabilities to the GitHub page which will then be looked into.