Table 1: Revision History

Date	**Developer(s)**	**Change**
Date1	Name(s)	Description of changes
Date2	Name(s)	Description of changes
...	...	...

Development Plan
Mechatronics

Team #20, Team Name
Robert Zhu zhul49
Zifan Meng mengz17
Jiahui Chen chenj194
Kelvin Huynh huynhk12
Runze Zhu zhur25
Mirza Nafi Hasan hasanm21

[Put your introductory blurb here. —SS]

1 Team Meeting Plan

2 Team Communication Plan

3 Team Member Roles

As of now, every team member will have the same responsibilities consisting of coding, identifying issues, testing, reviewing, and commenting on code. Further responsibilities will include hardware-software integration and testing. More responsibilities will be added as more specific tasks are discovered during the development process.

Table 2: Roles and Responsibilities

Name	**Responsibilities**
Robert Zhu Zifan Meng Fred Zhu Mirza Nafi Hasan Jiahui Chen Kelvin Huynh	Coding, issue identification, testing, reviewing, and commenting on code. Additionally hardward-software integration.

4 Workflow Plan

- How will you be using git, including branches, pull request, etc.?
- How will you be managing issues, including template issues, issue classificaiton, etc.?

5 Proof of Concept Demonstration Plan

What is the main risk, or risks, for the success of your project? What will you demonstrate during your proof of concept demonstration to convince yourself that you will be able to overcome this risk?

6 Technology

The coding for the project will be done in Python3 utilizing Flake8 as the linter to ensure error-free and idiomatic code. Unit testing for the Python code will be done through the use of the Pytest framework where various tests can be defined based on the intended code functionality. The same framework of which can and will be used to generate a measure of code coverage through the pytest-cov plugin. Continuous integration (CI) is planned to be used to ensure that coding errors and bugs are detected within a reasonable amount of time, however the specifics are to be determined as the group is unfamiliar with implementing the concept at this time. Libraries that are currently planned for use include OpenCV, Tensorflow, and Pyserial for serial communication with an Arduino board. Performance measuring tools will be used appropriately as the need arises, but some examples would include OpenCV's getTickCount() and getTickFrequency() functions as well as Python's time.perf_counter() function to track execution time of code. Additional tools may be declared as the need arises.

7 Coding Standard

Code will loosely follow the PEP8 Python coding standard. The Flake8 linter will also ensure that written code will follow this standard.

8 Project Scheduling

[How will the project be scheduled? —SS]