

Tips for Automaking

Overview

Making autos can be hard. This page will go over some tips on how to effectively create and improve autos.

Tips and Stuff:

Initial Orientation and Tag Visibility: So, one afternoon (literally the day we had to pack for world champs lol) in 2025, we were trying to finish an auto we were working on, but it kept messing up at the beginning of the path. When we looked at AdvantageScope, we figured out why: the localization was super inaccurate until it was able to see an April Tag. Basically, this means that the robot was struggling to figure out where it was on the field when it was unable to see a tag. We tried many complicated methods, but to no avail. Eventually, we simply rotated the robot's starting position so that it was able to see an April Tag at the start of the auto. This immediately fixed the problem. The moral of the story is to be mindful of what your cameras can see and look for simple solutions first.

Speed vs Functionality: When making autos, you might be tempted to speed them up as soon as possible so that you can get as many points as possible in the 15 seconds you have. However, you should prioritize functionality and consistency over speed. Follow this guide when making autos:

1. Make your auto do an action consistently
2. Wanna add another action? Do it, and make sure it works consistently.
3. Does the combination of those actions take longer than 15 seconds? Find places where you can speed things up. Increase the velocity and acceleration of the paths. Reduce or remove *wait* commands. Basically, just minmax until it fits within the time limit.
4. Go to Step 2

Revision #1

Created 2 July 2025 14:51:42 by Vihaan Gaurav

Updated 9 July 2025 17:29:56 by Vihaan Gaurav